

**Poverty and Livelihoods:
The Significance of Agriculture for Rural Livelihoods in
KwaZulu-Natal
(1993-1998)**

By
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Submitted in partial fulfillment of the degree of

Masters in Development Studies

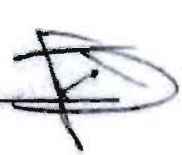
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DECLARATION

Submitted in fulfillment / partial fulfillment of the requirements for the degree of Masters in Development Studies, in the Graduate Programme in Development Studies, University of KwaZulu-Natal, Durban, South Africa.

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. It is being submitted for the degree of Masters in Development studies in the Faculty of Humanities, Development and Social Science, University of KwaZulu-Natal, Durban, South Africa. None of the present work has been submitted previously for any degree or examination in any other University.

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Abstract

Rural people in South Africa/KwaZulu-natal makes up a large portion of the total population. They depend on a wide range of activities for living. Besides farming, they also engage in petty trade and wage work in towns and cities. Pensions (public welfare) and remittances also contribute a share to the household budget. Total cash earnings, however, are not enough to enable the majority of rural residents to escape poverty.

This study attempts to present a case that the agriculture sector (farming) could contribute more towards improving the living conditions of these people. The argument centers on two facts: the fact that KwaZulu-Natal enjoys a plenty of agricultural natural resources and the second is that farming activity as a sector has certain characteristics worthy of consideration.

Findings indicate two things: it establishes the low (measured) income flow from agriculture arrived at by previous studies but at the same time points out to the expansion in farming activities. Comparatively, income derived from farming still compares poorly with others as it was five years ago (1993-1998). The second point which may appear odd is that, consistent with findings by other sources, the number of people or households practicing farming is steadily increasing over time in contrast to other activities such as informal sector, migrant labor and income sources such as remittances.

The study uses these facts and others to prove that the sector represents the central activity among the various components that constitute the livelihood system and that it has the potential to contribute more livelihoods as well as playing a lead role for the development of rural economy. The study recognizes the large magnitude of resources whether human or physical required and the constraints to tackle for realizing this but argues that in the absence of any realistic and feasible alternative, agriculture represents the second best route to poverty reduction in rural KwaZulu-Natal. It is also noted that the smallholder strategy in the short term can at best achieve an adequate level of household food security against hunger and malnutrition and may initiate a limited community level food and other farming related market transactions and employment.

The study concludes with a number of recommendations deemed necessary to help rural producers enhance their productivity and thus livelihoods generated from the agriculture sector.

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CHAPTER ONE: INTRODUCTION

1.1 Introduction

This chapter sets the context of the study. It first introduces the study area, rural KwaZulu-Natal. In this, it highlights the relatively large agricultural resources endowments in the province. This is followed by an explanation of the research objectives, methodology as well as the motivation and study limitations. The chapter concludes by outlining in brief the structure of the thesis.

1.2 An Overview of KwaZulu-Natal

South Africa comprises of nine provinces and had a total population of approximately 44 819 778 million in 2001 (Stats, 2004). One of these provinces is KwaZulu-Natal with the largest number of population that amounted to 9 426 017 in 2001 (Stats, 2004). It is situated on the east coast of the country and covers 92 100 square km or 7.6 percent of the total surface area of South Africa, 1 219 090 square km. In terms of education, KwaZulu-Natal ranks above the official national level of literacy amongst the adult population 82,8 percent with a rate that equals 85 percent and scores a little lower from the national average of 63,2 years in terms of its record of health as it has an average life expectancy of 61,7 years while having the fourth highest rate of infant mortality in the country at 44 per 1000 lives which is slightly higher than the national average of 41 per 1000 live births (DBSA, 1998).

The economy of the province has not been able to keep pace with the magnitude of the young people available for or seeking work. Only 52 percent of all the people employable could be accommodated in the formal economy while in contrast the absorption capacity for South Africa as a whole was 53,9 percent and that of the Western Cape 63,8 percent in 1994 (DBSA, 1998: 8). The economy of the province grew less diversified in terms of labour similar to the national pattern and the production structure shifted from agriculture and mining to the less labour-intensive sectors such as manufacturing, services, and trade and catering (DBSA, 1998: 9). The impact of this is reflected in a high unemployment and poverty particularly in rural areas.

A high proportion of the population in the province live in non-urban areas. While urban population account for 43.1 percent, the percentage of those residing in non-urban areas equals 56.9 percent out

of the total population (Statistics South Africa, 1996)¹. Land potentially arable of KwaZulu-Nata amounts to 13.1 percent while that suitable for grazing is 59 per cent (DBSA, 1998: 12). People in rural South Africa generally make a living by engaging in various activities such as farming, local and migrant wage labour and informal activities. There are also other means of income that involve only resource transfer. Examples are remittances and pensions. However, the total household earnings in these areas appear to be insufficient for achieving a minimum level of subsistence and thus a great number of people live in poverty.

Conventional approaches to the role of agriculture in economic development underestimated its importance and suggested concentration on the industrial and service sectors arguing that they have the capacity for higher productivity, growth and thus employment opportunities (Mokyr, 1976 cited in Poonyth et al., 2001). This led to the neglect of the agriculture sector and rural areas. Rural people for whom agriculture was the main source of livelihood were thereby disadvantaged and affected badly under the new system. According to migration theory, at least, the majority of those people were expected to 'urbanise' i.e. move into urban areas and take up non-farming jobs. But this did not materialise in most developing countries, especially, sub-Saharan Africa. This partially explains the high poverty levels and hunger in rural areas today.

Failure or inadequacy of other means to address these problems appears to have induced a review of the role of agriculture for poverty reduction. A new wave of paradigms, particularly, recent ones such as Poonyth et al., (2001) are now stressing the importance of agriculture to national economic development and poverty reduction based on the notion of interdependence between the sector and industry. A number of countries such as China, India and Bangladesh are cited as success case where agriculture has made a substantial contribution to employment and food security.

1.3 The present study: motivation

The study was inspired by two issues or observations. The first one is evidence in literature indicating the availability of substantial stock of agricultural resources in KwaZulu-Natal and the second is about the fundamental differences in the nature of the means rural people use to earn a living. Rural people in this province engage in a variety of economic activities such as farming, wage labour (primary and secondary), remittances, informal sector activities and pensions to

¹/ Although a census was undertaken in South Africa in 2001, an urban/rural breakdown is not yet available.

generate adequate livelihoods. A quick examination of these components reveals some major differences in their nature and provides some insights that are useful in re/considering their relative potential contribution to rural livelihoods and thus poverty reduction. This set the basis for developing the research topic and hypothesis.

The primary broad concern and area of investigation of this research is rural poverty and livelihood strategies of rural households to escape it. A number of concepts and theories pertinent to this subject make up and define the conceptual context of the study. These are: 1) a brief survey of rural poverty at the different tiers starting with worldwide level down to sub-Saharan Africa, South Africa and focussing on KwaZulu-Natal, specifically on rural areas of the province which constitute the study focus; 2) the role of agriculture in national economic development and poverty reduction especially in rural areas. 3) diversification: recognising the diverse activities that make up the livelihood system of rural producers provides the analytical framework for estimating the contribution of agriculture to rural livelihoods. 4) and the various approaches to poverty reduction such as the smallholder strategy and the Sustainable Livelihood (SL). The paper attempts to accommodate the smallholder path to agricultural development as an entry point within the larger SL analytical framework used for answering the research questions.

1.4 Research hypothesis

The research topic broadly is concerned with estimating the contribution of agriculture in rural KwaZulu-Natal and exploring possibilities for the sector to play a greater and effective role for generating additional livelihoods and securing household food security directly or through its various linkages. The research hypothesis is that though measured farm income share is relatively low, total socio-economic contribution of agriculture to rural livelihoods is relatively significant. The sector occupies comparatively higher status within rural households' livelihood system. This is factored into two hypotheses stating that:

- Farm output is important for household food security and cash needs (from sale of surplus, when available); and
- The different 'nature' of the agriculture sector qualifies it to play a greater role towards improving rural livelihoods and reducing poverty.

1.5 Study objectives

The study has three objectives. The first exercise involves measuring the benefits rural people derive from farming and the scope of the activity. It has twofold purposes. First, it is intended to obtain an idea of how much farming contributes to rural livelihoods, especially, towards household food security and nutrition. Secondly, to establish changes in trends over the period in the sector in order to know whether it is expanding or declining by comparing both years of the KwaZulu-Natal Income Dynamics Study (KIDS) 1993-1998, a panel survey undertaken in KwaZulu-Natal. The comparative analysis of the various livelihoods is aimed at finding out how agriculture fares with these sources. In other words, to work out how much agriculture shares and establish where it stands in terms of importance relative to the other means of income (wage labor, remittances, pensions, and informal sector activities). The third objective of the study is to make the case that farming (agriculture) as one of the sources of rural household income has certain characteristics that make of it an important component of livelihood strategy with potential for higher share compared to others. These are significant for policy decisions relating to rural poverty reduction.

1.6 Research methodology

The study will apply a quantitative methodology. It will involve running statistical analysis using a limited number of techniques on secondary data, KIDS. This is a large socio-economic data set collected in a survey in KwaZulu-Natal using a questionnaire instrument. The data set has almost all the sections required for running the relevant analyses. The method of sampling used in the survey is the probability sampling. The study will use descriptive statistics (mean, media and crosstabs.) and test of statistical significance.

Additional data will be sourced from books and journal articles pertinent to the subject area. Some of the themes integral to the literature review cover, for instance:-

- Rural poverty
- Old and contemporary theories on the role of agriculture in economic development and poverty reduction
- Aspects of rural livelihoods and the non-farm sector; and
- Approaches to poverty reduction in rural areas.

1.7 Study limitations

The KIDS project, as explained above, is a general socio-economic survey with broad objectives whereas this study focuses specifically on the role of agriculture (farming) as a sector. This feature in the design of the study creates a number of limitations. A main one is manifested in the lack of appropriate and specific data on agriculture linkages or agriculture-triggered non-farming activities. The data available on this does not indicate whether the existing non-farm enterprises have been started as a result of significant farm harvest (income). Another limitation is that the data does not include variables on the socio-economic role of agriculture. The literature stresses the value of these aspects for the social and economic activities or livelihoods of rural residents. This includes benefits such as the use of farmland as collateral against loans from community members, livestock for services like ploughing and bride dowry and many others (Hatch, 1996 and Raandela, 2003).

1.8 Definition of concepts

The study makes use of a number of themes and concepts the main ones of which are: livelihood strategy and security, the sustainable livelihood approach, diversification and agriculture and growth linkages. To start with, livelihood, according to Davis, (1995), is adequate stocks and flows of food and cash that enables a household to meet a basic level of needs whereas security refers to owning of or having access to resources and income earning activities including reserves and assets to offset risk, ease shocks and be prepared to meet contingencies. Sustainable, on the other hand, refers to maintaining or enhancing of resource productivity on a long-terms basis. This applies more strongly when the resources are natural e.g. agricultural resources. Combined together, the three elements form achieving what is referred to as 'secure and sustainable livelihood'. This is the central objective of the SL approach and should, of course, be of any poverty reduction intervention. Another definition of livelihood, Lipton (1996), however, stresses its difference from a job on the basis of working days per year. It presents a livelihood roughly as a 200 day working year, sufficient to produce an amount of income enough to keep a worker (plus dependents) out of poverty.

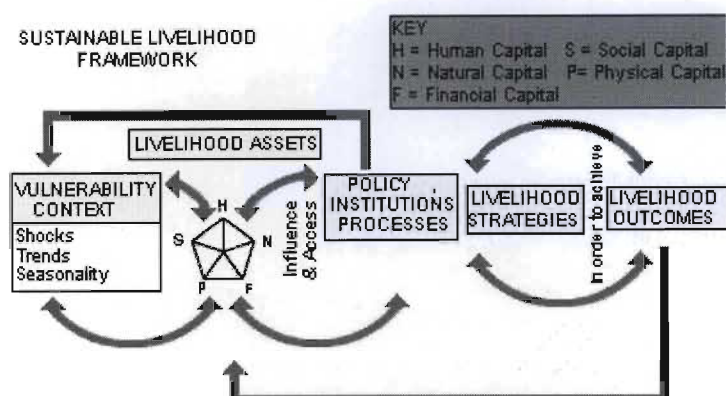
The SL, in brief, is made up of three components that are: assets, activities and livelihood outcomes. Assets involve natural, physical, financial, social and more important capabilities in terms of individual's health and education. A combination of all or some of this together with activities produces a livelihood. This framework facilitates a better understanding of the lives of rural people and a quick and effective identification of their strengths and weaknesses or opportunities and

constraints. This makes it relatively easy to design a poverty reduction intervention based on influencing certain elements or variables of the framework.

The DFID's SL framework, shown below, summarises the main components and influences on people's livelihoods. It does not provide an exhaustive list of the issues to be considered.

Figure 1: the SL framework

(Source: http://tumi.lamolina.edu.pe/ipps/Sustainable%20Livelihoods/sect2/2/2_01.htm)



Barghouti et al. (1990) defines diversification as a process of broadening and strengthening the income sources of rural households. This process, according to the author, covers a wide range of activities such as the introduction of new crops and technologies into traditional farming systems to the development of off-farm jobs in small-scale rural industries. However, this definition is quite broad. In this study, by diversification is meant, more specifically, the non-farm activities that rural people extend their economic activities into for supplementing their farm livelihoods. These, in the context of the study area, KwaZulu-Natal, are wage labour in primary and secondary labour markets, remittances, pensions and informal sector self-employment.

Concerning agriculture, for the purposes of this study, a focus is placed only on arable farming (crop) and livestock production excluding thereby other components such as fisheries and forestry. Growth linkages, especially in rural areas, is usually linked to or associated with the agriculture sector. The linkages paradigm rests on the premise that growth in the agricultural sector can lead to indirect growth in non-farm incomes and employment (Binswanger, 1996). These effects arise as a consequence of an increase in the use of farm inputs, in processing, marketing and transport services to handle the larger output. In addition, they also arise from increases in household expenditures on

consumer goods and services prompted by the increase in farm income (Hazell and Roell, 1983 cited in Binswanger, 1996).

1.9 Rationale for Undertaking the Study

Various sources maintain that there is generally a high rate of unemployment and deprivation in South Africa and in KwaZulu-Natal. Alleviating the misery and humiliation that poor people suffer should be not only on human grounds but also for the simple fact that a problem on such a massive scale may represent a potential source of social and political instability. This is apart from the substantial financial burden in the form of resources the state transfer to the poor in addition to the cost represented in large slack pool of rural labour that is projected to grow (Lipton, 1996) which is inefficient in economic terms. The formal sectors of the South African economy, according to (Schirmer, 1999) have experienced retrenchments and job losses. The author, as a result, suggests considering the importance of land-based livelihoods to make up for this. The existing paradigm of economic development has done poorly in terms of delivering work opportunities for the rural poor to earn income and improve their living standards. To the contrary, many argue that the government's current macro-economic framework and its opening up policy has hurt the unemployed and poor South Africans (Motlounq et al. 2002: 531). In view of the apparent inability of the modern sector urban-based strategies (note above) to address the situation, the exploration of other routes would be a natural response.

Under the development path adopted by many LDCs upon independence, which accorded higher priority to industrialisation as illustrated above, the poor performance of agriculture and rural development projects was understandable. But the disadvantage was that this experience has led to doubts about agriculture's relevance to strategies for growth and poverty reduction (DFID, 2003). However, this attitude has changed over time and the role of agriculture in this respect is gaining fresh attention especially under the absence of any realistic alternative (DFID, 2003). It is also noted that the development of this sector and progress in terms of farm yields and employment usually constitutes the initial step for reducing mass poverty in many low-income countries (IFAD, 2001).

Although this may be conclusive for typical rural areas, it is, however, hard to make a generalisation about the feasibility of this path in South Africa due to the vast agro-ecological variations among the different provinces as well as the unique character of its countryside. But where there is at least a

reasonable level of natural resource endowments, the ‘proposition’ that agriculture is a potential possibility to rural poverty reduction is at least worth studying. Based on a similar line of reasoning, this study suggests that in view of its relatively ample agricultural potential, KwaZulu-Natal stands a better chance of generating additional rural livelihoods through the development of this sector.

At present, farming in KwaZulu-Natal is one of **the main economic activities** undertaken by rural households to secure sustainable livelihoods. The number of people engaged in farming is relatively large. This itself, namely, the preponderance of farming forms part of the reasoning and motivations behind the rationale of the study. IFAD (2001) argues that poverty-alleviation efforts for sub-Saharan Africa rural poor “must heavily emphasize agriculture and activities dependent on agriculture for their dynamism” (IFAD, 2001: 13).

Cash flows from farming in the province is reported to be relatively quite less than other sources of income such as wage labour, remittance and social pensions. This however, is largely attributed to a number of factors that has more to do with ‘human’ intervention than ‘nature’. This implies that a real commitment and sound management of the sector’s resources and development is likely to enhance its contribution to rural livelihoods in the province in terms of secure household staple food as a priority, income and wage labour.

2. Structure of the Thesis

The first chapter introduces the study context, South Africa/KwaZulu-Natal. It starts off with presenting a brief overview about its demographic data, and the stock of natural resource endowments, its economic performance and structure, methodology, and objectives. The chapter concludes with a justification or rationale statement for undertaking the study. This component starts by highlighting the problem of poverty and unemployment in South Africa/KwaZulu-Natal, the slow progress of government efforts to alleviate it through the present routes and based on this raises the need for looking at other alternatives such as the agriculture sector, which the study claims, to have the potential to contribute significantly to rural livelihoods in KwaZulu-Natal in view of its large natural resource base comparatively.

Chapter two looks at the significance of the agriculture sector for national economies. It first lays out the theoretical perspective pointing out the differences in views over this issue. It presents views

from those who advocate for a greater role for the agriculture sector at the initial stages of development that gradually shrinks with transformation of the economy into industry and service dominated development. Opponents to this view maintain that due to lack of (or limited) productivity of the sector, resources should be diverted to industry. The chapter then addresses the significance of agriculture against this theoretical framework enumerating the various benefits it renders and the role it plays particularly towards improving rural livelihoods and generally the development of rural economies. Where possible, it accompanies this with examples of cases to substantiate this argument. It concludes with a word about neglecting the agricultural sector in national policies and the bias against rural areas in favour of the secondary sectors and urban areas 'urban bias'.

A somewhat detailed and an updated picture about rural poverty introduces chapter three. This is done at different levels starting with international one and coming down to South Africa/KwaZulu-Natal. Aspects of poverty addressed include its causes as a product of livelihood systems and the overall socio-economic structures and institutions that shape these systems. The contribution of agriculture to enhancing rural livelihoods in KwaZulu-Natal represents the focus of the chapter. Of particular interest for the study in this regard is the Apartheid experience of South Africa and how this produced a distorted sub-standard rural environment in the former homelands in South Africa characterised by underdeveloped agricultural sector and agrarian economy and thus high levels of poverty, unemployment and the difficulties such a reality creates for agriculture development.

Chapter four presents the research methodology and the secondary data source used for the study, namely, the KwaZulu-Natal Income Dynamics Study, known as KIDS.

Chapter five is on analysis and findings. The chapter is structured around the various aspects and areas where agriculture makes contribution to rural livelihoods. It starts with measuring the cash flow and other elements relating to the scope of the farming activity in the province for agriculture alone. The second part undertakes a comparative analysis of farming with the other means of livelihoods and sources of income such as wage labour and remittances. The chapter concludes with a section on the association of farming with poverty.

The last chapter deals with the conclusion and policy recommendations. It summarises the study findings and recommends a number of steps for raising agriculture productivity and enhancing its livelihoods in rural areas of KwaZulu-Natal.

CHAPTER TWO: THE ECONOMIC IMPORTANCE OF AGRICULTURE TO NATIONAL ECONOMIES

2.1 Theoretical framework

The contribution of agricultural growth to economic development has been extensively discussed. However, according to Yao (2000) and Poonyth et al. (2001) the literature presents two conflicting views about this issue. For development economists, (Lewis, 1954; Nurkse, 1953; Mellor, 1979 and Rostow, 1960) agriculture has a very important role in the economic development process of a nation, stressing that improving agricultural productivity is the basis for a successful development strategy. Economic historians, (Mokyr, 1976; Field, 1978) cited in (Poonyth et al. 2001), on the other hand, based on the law of comparative advantage suggest that there exist a negative relationship between agriculture and industrialisation because of low factor productivity in agriculture and the competition of this sector with industry over labor.

Many western economists and policy-makers tended to view agriculture as a relatively unimportant contributor to economic growth and to pay it relatively little attention. This was essentially based on the negative view of agriculture's role and the empirical observation that agriculture's relative share of Gross Domestic Product (GDP) inevitably declines during the course of economic development (National Department of Agriculture, 1996). Consequently, resources were shifted away from agriculture and in favor of the promotion of industrial development, which in many cases, according to the same source, led to economic growth in both sectors being stifled as a result of insufficient supplies of food and raw materials at affordable prices. Yao, (2000) also holds the same view that a hasty implementation of this theory in developing countries led to a suffocation of agricultural growth and resulted in low efficiency in industries and poor performance of the entire economy (Yao, 2000). The manifestation of this problem-situation in rural areas was lack of the means for adequate livelihood. As FAO, (1998) points out, rural people were neither accommodated in the new era of transition (industry-led economy) nor enabled to maintain the previous levels of production and stocks and flows of cash from farming in an agrarian economy. FAO notes that "policies based on this strategy failed mainly because they overlooked the importance of agricultural production,

particularly of staple foods, as a critical source of entitlements for the many food producers, who were also consumers.” (FAO, 1998: 16).

One of those works stressing the role of agriculture in economic development is Johnson and Mellor (1961) cited in (National Department of Agriculture, 1996). In their argument, they pointed out the essential role and contributions of agriculture in relation to the structural transformation of economies. This is achieved by means of providing labour, capital, foreign exchange and food to the growing industrial and urban sector and it could also supply a market for domestically produced industrial goods. This, according to the source, was a shift in thinking that prompted a reconsideration of previous views and a realisation of the positive role that agriculture can make to sustained economic growth and development.

To sum, the evolution in thinking about the role of agriculture was initially characterized by a divergence of views. This, however, gave way to a new consensus (Kuznets, 1964; Mellor & Lele, 1973; Hazell & Roel, 1983) that promoted a positive image of the sector and recognized its significant contribution based on its potential and capacity not only to provide resources to the industrial sector (forward linkages) but most importantly to generate ‘backward linkages’ to other sectors in the economy (Yao, 2000). It is this latter dimension, namely, the backward linkages, that could really be considered the ‘value added’ of these studies. Its significance lies in highlighting the large direct and indirect economic benefits created by virtue of the strategic interdependence mainly between agriculture and industry as well as other sectors in the economy. This aspect was virtually missing in the analytical framework about the role of the sector in previous studies and thus was not included in the calculations of the benefits of the sector and its share in the GDP.

Empirical observations provide evidence that supports this new theory. A number of development economists (including Kuznets, 1968; Kalecki, 1971; Mellor, 1967; Singer, 1979; Adelman, 1984; de Janvry, 1984; Ranis, 1984; and Vogel, 1994) point out that while agriculture’s share fell relative to industry and services, it nevertheless grew in absolute terms, evolving increasingly complex linkages to non-agriculture sectors. Central to this new perspective to the role of agriculture in national economic development was the theme of ‘interdependence’ between agricultural and

industrial development and the potential of agriculture to stimulate industrialisation (Stringer and Pingali, 2004). The authors argue that agriculture's productive and institutional links with the rest of the economy produce demand incentives (rural household consumer demand) and supply incentives (agricultural goods without rising prices) that promote modernisation. This broader approach to the economic roles of agriculture suggested that the one-way path leading resources out of the rural communities ignored the full growth potential of the agriculture sector.

Stringer and Pingali, (2004) approve of the transfer of resources to the industry and urban centres but not to the negligence of the needs of the agriculture sector "resources may need to move towards industry and urban centres, but attention had to be focused on the capital, technological, human resource and income needs of agriculture." (Stringer and Pingali, 2004: 2). This requires policy-makers to change strategies as well as attitudes to all that is rural or agricultural.

2.2 The small-farm approach

The role of agriculture in economic development and rural poverty reduction is conditioned by a wide range of issues such as the domestic agricultural policies, the macro-economic environment and most important of all is the system of agricultural organization and the production structure whether its subsistence traditional agriculture or modern smallholder or heavily mechanized large-scale commercial farming. These different modes of production and organization have significant implications concerning the proper and optimum utilization of the agricultural natural resources, the magnitude of material benefits flowing from this sector particularly in terms of employment opportunities and its distribution mainly between the urban and rural areas as well as between the different socio-economic classes.

The small-farm orthodoxy refers to an agricultural growth approach based on small-farm efficiency. This path as argued below represents the best strategy for effective and efficient use of agricultural resources in the developing countries economically and socially. Many sources indicate that under favorable production and improved infrastructure and services, small farms have the potential to deliver enough not only to address poverty but also to contribute greatly to local and national economy (Lipton, 1996; Griffin et al. 2002; Cousins, 2002). The ability of this approach to accommodate both concerns: growth and equity, as the primary concerns underlying the emergence

of the whole notion of rural development, is regarded as one of the features that explain its duration for so long (Biggs and Ellis, 2001). The smallholder path is based on an economic theory about agriculture and the linkages created as a result of its growth and make of that an 'entry point' to the overall process of rural development. It begins with the proposition that agriculture plays a key role in overall economic growth by providing labor, capital, food, foreign exchange and a market in consumer goods for the nascent industrial sector in a low-income country. One of its components/ideas is that this approach allows the maximization of the abundant resource or factor, namely, labor in a situation of land scarcity (Lipton, 1996 and Lipton, 2004). Another idea is that rising agricultural output in the small-farm sector generates 'rural linkages' that spur the growth of labor-intensive non-farm activities in rural areas. Johnston and Kily (1975) and Mellor (1976) cited in Biggs and Ellis, (2001) go on to assert that the scale of non-farm activities generated by the small-farm approach is higher than for large farms. There seems to be a consensus that the development and the viability of the non-farm sector is an outcome of the level of agricultural development and productivity in rural areas. Singh in Biggs and Ellis (2001) stresses the importance of a growing agricultural sector as a pre-requisite for a vital rural non-farm economy and that without growth in agriculture; poverty reduction would be an impossible task.

One of the strengths of the small-farm orthodoxy noted earlier is that it emphasizes the significance of the agricultural sector as the engine of economic development. This seems to make sense according to the principle of comparative advantage and (family) labour where there are plentiful natural agricultural resources including land and water. It is also understandable and economically rational for rural producers to engage in other activities where the opportunity cost of resources invested in farming (mainly labour) is high. The criticism that this approach assumes the rural poor are necessarily small poor farmers is countered by pointing out the gains the landless could make by being employed in a buoyant labour-intensive small-farm sector (Lipton et al., 1996). However, according to Biggs and Ellis (2001) this is becoming questionable in light of emerging evidence that the rural poor tend to depend on non-farm (and often non-rural) sources of income in order to sustain their livelihoods. But the question to raise here is why? This process of occupational flexibility and spatial mobility (Bryceson, 1996) is attributed to the decline of agricultural income, one reason being the sub-division of land into small plots (Bryceson and Jamal, 1997 cited in Biggs and Ellis, 2001). But if the question about the context -i.e. natural endowments, makes it potentially possible for farming to be a productive activity in a given rural setting e.g. in limited and specific cases in

KwaZulu-Natal as this paper tries to establish- is done with, then it is a matter of decision-making and choices of where or in which sector to allocate limited resources. This involves much more than pure economic considerations. It is a political exercise in the first place. Ideally speaking, such a decision should be made on the basis of both equity and efficiency and hence the appropriateness of the small-farm approach where applicable in the South African case. In addition, it is argued as a pre-condition that the small-scale sector should be strategically located within the mainstream economic development thinking and not perceived as a short-run activity for safety nets or only subsistence.

Agriculture as a sector is somewhat different to other sectors. Production processes in this sector are affected by a whole range of factors and issues at multiple levels, many of which are definitely outside the control of small farmers. The possible declining trend of rural agricultural productivity and incomes and the tendency of some farmers to engage in farming on part-time basis or abandon it altogether in favour of non-farm activities could be attributed and explained by a variety of reasons. Examples are natural hazards like drought, inadequate arable land; lack of investments on land due to financial constraints or those relating to the macro environment policy, or terms of trade or many other reasons.

However, it is worth noting that the agriculture sector, as a primary activity, may not have the potential to absorb the ever-increasing rural labor force on a sustainable basis in the long run. But it certainly does have the capacity to deliver substantial material benefits especially for the poor in rural areas, which would help alleviate poor living conditions there and stimulate growth of the agrarian economy, that incorporates both rural areas and the small towns in these areas. Byres (1982) agrees with Lipton's argument that resources invested in agriculture now will yield a better rate of return than investments in other sectors but he notes that this is only true in the short run: "Such investments will frequently have less effect on the long-run prospects for growth in an economy as a whole, than those in capital goods industries." (Byres, 1982: 42) Thus in the short-term until the transformation or transition envisaged - which is believed to happen anyway- takes place in an appropriate and sound manner. Until then, as Vaughan (1992) cited in Hart (1994) notes, agriculture/the rural sector should not be neglected "...in the interim, it might be suicidal to relinquish it".

With regard to the study area, South Africa/KwaZulu-Natal, Delgado (1999) cited in Matunugul et al. (2001) stresses the importance of small-scale agriculture in South Africa and tends to believe that it has the potential to become a major source of employment and political stability. This however may be too optimistic to achieve due to variations and differences in agro-ecological and natural resources. The views expressed by Makintosh and Vaughan (1996) consist with the main thinking underpinning the argument presented in this study for a greater role of the sector. The authors maintain that the implementation of such a strategy on a wide scale across the country would not be sustainable and as such they suggest concentrating on areas with potential (Makintosh and Vaughan, 1996). However, in view of the substantial constraints and difficulties associated with small-holder farming in South Africa (Mather and Adelzadeh, 1998), global competition especially from the heavily subsidized agricultural imports of developed world (DFID, 2003), and above all, local competition from large-scale commercial farming, this approach -during its initial stages- may not be able to deliver more than securing rural household food and nutrition needs and employment and food-related trading on a limited scale. This means that, it takes huge amount of resources and changes to realize the potential of the sector in the manner outlined above in the theoretical perspective. This is inevitable as long as there is no alternative to reduce rural poverty.

2.3 The contribution of agriculture to national economies

The discussion of this issue is informed by theories that maintain that the contribution of agriculture to national economic development depends on the development stage of the economy. This implies that the role of agriculture changes parallel to the evolution of societies through the various stages of development. This sequence or process starts off with agriculture and rural areas and progresses into urbanised societies with mainly industry-led economies. The contribution of agricultural growth to economic development varies markedly from country to country and from one time period to another within the same economy. In an industrialized country, for example, agriculture tends to have a very small share in GDP and thus the sector may not be important. In a developing economy, on the other hand, most often agriculture is a major production sector and accounts for a large proportion of GDP and as such its role is crucial.

The same logic applies to the economy, depending on its type or production structure. The sector's contribution tends to be more important in a predominantly agrarian economy. The growth and

development of an economy means a change in its production structure and demographics. A developed country experiences a shift away from agriculture to agro-industry and non-agriculture production and a remarkable degree of urbanization and as a result, a decrease in the size of the rural population. Almost all of the present developed countries went the same route to 'structural transformation' (Yao, 2000). However, Yao notes that, for the developing countries this process started relatively late, usually in the 1950s, and that the economies of these countries vary sharply in respect of the extent of transformation (Yao, 2000).

The new perspectives on agriculture stated earlier led to a reconsideration of the role of agriculture in economic development. At present, Stringer and Pingali, (2004) note, the development consensus is that a strong performing agricultural sector is fundamental for overall economic growth.

2.3.1 International experience

The assessment of agriculture's role generally and the way it affects the economic growth process follows the conventional approach by dividing the contributions of agriculture into four different categories and examining each one by presenting a case where possible.

2.3.2 Product contribution (food and raw materials)

Agriculture supplies food and fibre for human consumption as well as raw materials for industry at low prices and this helps reducing the cost of industrialisation while at the same time increasing real wages and therefore increasing the demand for domestically manufactured goods. Thus stable food prices are imperative for achieving economic growth (National Department of Agriculture, 1996). This role is reinforced further in the developing countries in view of the high population growth and steady urbanisation which translate into higher demand for agricultural products generally and food staples in particular. It is also noted that income elasticity of the demand for food is estimated to be much higher in less developed countries than in developed ones (0, 6 and 0, 2 respectively) which would have an adverse impact on the whole economy in times/in the vent of inelastic food supply (NDA, 1996).

An important point mentioned above is that agriculture in Less Developed Countries (LDCs) and regions plays a vital role in expanding the size of the domestic market. This is achieved by increasing the real income of farmers and thus increasing rural purchasing power, which in turn boosts demand for industrial products and therefore acts as a stimulus to industrial development. Here the role of agriculture with respect to the development of agrarian economy based on rural-urban production and consumption linkages becomes very clear and important. And it is here that lays the genesis of the South African rural problematique where anti-small African farmers Apartheid policies gave birth to a distorted 'unique' type of rural physical scenes and economy in South Africa's countryside and homelands (Cousins, 2000).

The Chinese experience supports the validity of the new theories emphasising the role of agriculture for overall economic development performance. A policy reform adopted by the government of the country in 1978 enhanced the sector's contribution and has had positive outcomes for the whole economy. A comparison of the pre-reform economic performance vis-a-vis post-reform years shows that the decline in agriculture's share reduced from 2.23 percent over the period from 1952-1978 to 1.76 percent after the reform. In terms of overall economic growth rate, China's GDP rose from a level of 6.15 percent growth per year during the pre-form period 1952-78 to 9.79 percent over the years after the reform 1978-96 (Yao, 2000: 36-37). The author notes that although agriculture's share decline gradually overtime: "it is important not to overlook the critical importance of the product contribution of domestic agriculture to the maintenance of an adequate rate of economic growth." (Yao, 2000: 36).

2.3.3 Factor contribution

The two basic factors, capital and surplus labour, can be provided by agriculture to the national economy (Kydd et al. 2004). Capital transfer in developing countries usually took the form of indirect agricultural taxes through manipulating the marketing system. An industrialisation process should benefit from capital transfers and increased use of cheap agricultural labour. It appears that this process did not take place in many developing countries, and the high proportions of rural population particularly those economically active in most of these countries supports this conclusion.

2.3.4 Earning foreign exchange

The agricultural sector generates foreign exchange through exports or saving of hard currency through import substitution (Poonyth et al. 2001) Reserves thus earned are used for importing of capital goods mainly for the industrial sector.

2.3.4 Employment

The availability of labor at a low social opportunity cost can be an important factor to promote economic growth and development. Many less developed countries experience the existence of surplus unskilled labor. Agriculture provides employment to this segment of the labour force especially in the developing countries.

The table shows that, in Lesotho, for example, agriculture represents only 11 percent of GDP, but it employs 40 percent of the total labor force. In the ten countries in which 30 percent or more of GDP is generated by the agricultural sector, about 85 percent of the labor force earn their living from agriculture.

Table 1: The importance of agriculture to national economies

Country	Agriculture as a % of GDP (1995)	Agricultural Labour as % of Total Labour Force (1990)
Angola	7.8	75
Botswana	4.2	46
Burundi	52.1	92
Eritrea	11.2	80
Ethiopia	50.0*	86
Kenya	29.7	80
Lesotho	11.0	40
Madagascar	33.8	78
Malawi	44.2	87
Mozambique	34.9	83
Namibia	13.6	49
Rwanda	37.8	92
South Africa	4.4	14
Swaziland	12.5	39
Tanzania	46.2	84
Uganda	49.5	85
Zambia	18.7	75
Zimbabwe	17.1	68

Source: World Bank CD ROM and FAOSTAT. * Estimates

2.3.5 Indirect benefits: growth linkages

Direct growth is attained by stimulating the tradable sector through widespread adoption of exportable goods, or by lowering the unit cost of marketing these goods. Matungul et al. (2001) notes that reduction of transaction costs in the production and marketing of food crops would result in growth linkages being created that prompts improved livelihoods in rural areas. Delgado et al. cited in Hendriks et al. (2003) underlines the importance of not only reduced transaction costs but also agricultural productivity resulting from technological factors as conditions essential for generating higher incomes from tradables and starting off the process of economic growth. Agricultural growth promotes and at the same time relies on increased use of industrial products such as fertilisers, insecticides, farm machinery and equipment, electricity and many others. This suggests that an increasing share of agricultural output value is accounted for by the non-farm sectors. In China, irrigation and mechanisation involved a large amount of industrial input into agriculture, creating a strong backward linkage effect driving the rapid development of agro-industries. For example, grain yield increased by almost three times from 1155g/ha in 1950 to 4895 kg/ha in 1996 (Yao, 2000: 38). According to Delgado et al. cited in Hendriks et al. (2003), recent studies in African countries show multipliers ranging from 2.69 to 3.96.

It is important to note that the debate about dynamic small-scale agriculture (rather than large-scale farms) centres on the potential of this form of agricultural production to stimulate multiplied non-agricultural employment effect through extending linkages with the rural non-farm sector (Van Zyl et al., 1996).

The table below shows the share of the non-farm sector in employment for some African countries. The statistics in the table reveal that the sector's share in employment increased from 22 percent of total employment in the period 1978-1979 to 34 percent in 1985. More interestingly, the table displays the differential in the sector's employment based on the income tercile. In Ethiopia, for instance, in the year 1989/90, the first income tercile recorded the highest share (34 percent) compared to the other income groups. The sector shows a contrasting pattern in Lesotho because of migrant labour to South Africa and impact of apartheid policies.

**Table 2: Non-farm income employment share for selected
Least Developed Countries**

Country	Years	Population group	Percentage share of employment
Burkina Faso	1978/79		22
	1981-85	Sahelian (Unfavourable)	34
		Guinean (Favourable)	41
Ethiopia	1989/90		31
	1989/90	1st income tercile	34
		2 nd income tercile	30
		3 rd income tercile	3
Lesotho	1976		67
	1976	1st income quartile	30
		2nd income quartile	63
		3rd income quartile	94
		4th income quartile	84

Percentage share of employment.

Source: FAO, Rome (1998), the State of Food and Agriculture 1998, Part III

In a recent study commissioned/undertaken by the Food and Agriculture Organisation of the United Nations (FAO, 2001) on the role of agriculture in the development of LDCs, agriculture is reported to be at the heart of the economies of these countries though at different degrees. The study notes that agriculture accounts for a large share of gross domestic product (GDP) (ranging from 30 to 60 percent in about two thirds of them), employs a large proportion of the labour force (from 40 percent to as much as 90 percent in most cases), represents a major source of foreign exchange (from 25 percent to as much as 95 percent in three quarters of the countries), supplies the bulk of basic food

and provides subsistence and other income to more than half of the LDCs' population (FAO, 2001: 01). It also points out that the forward and backward linkages within the rural sector and with other sectors of the economy provide added stimulus for growth and income generation.

From the above, it is clear that agriculture can contribute to the rate of economic growth and industrial development given the various linkages between agriculture and the rest of the economy. However, as mentioned earlier, this varies according to the level of the development of a country. The role of agriculture outlined above applies to the poorest and less developed countries (LDCs). The contribution of agriculture to the economies of developed countries, on the other hand, is relatively low. As far as the South African economy is concerned, we have, as aforementioned, an extra-ordinary situation of an agricultural sector with a dualistic nature where a developed first-world economy co-exists with an underdeveloped and largely subsistence sector (National Department of Agriculture, 1996: 6). So the viewpoints with regard to the role of agriculture expressed above are therefore particularly relevant to the less developed regions, i.e. the former TBVC states and self-governing territories. The source postulates that an improvement in agricultural productivity in these areas along with the restructuring of the commercial agricultural sector can most definitely benefit the other sectors of the economy.

2.4 The agricultural sector in South Africa and its economic contribution

2.4.1 The agricultural sector in South Africa: structure and performance

The agricultural sector in South Africa comprises both the capital-intensive large-scale commercial white farms along with the small-scale subsistence-oriented farming largely found in the homelands and represents the most disadvantaged farming sector in South Africa (National Department of Agriculture, 1996). This duality is a long-standing feature and is still there today. Owing to the legacy of apartheid era discriminatory policies the first sub-sector was able to enjoy a wide range of state support services and incentives such as credit, subsidies, specialized private sector service institutions and organizations such as the Land Bank, Agricultural Marketing Boards and others (Jack and Kelembe, 1993). This helped to enhance its productivity and contribution to the national economy. The state agriculture policy was also biased against small farms and labour intensity in

favour of large mechanised production units. All this depressed the capacity of agriculture to create livelihoods whether through farm wage employment or through independent family farming.

The potential for agriculture to contribute to growth and employment given its large indirect role in the economy has been interpreted in different ways. Out of all the approaches proposed, the one of MERG seems to be in line with the reasoning underpinning the main argument in this study. It placed a very different emphasis on the potential of agriculture for job creation and growth. According to this paper, investment in agro-industry and social infrastructure are considered the principal pillars of macro-economic strategies for growth and job creation in rural South Africa (Mather and Adelzadeh, 1998)

Agriculture as a primary sector has traditionally played an important role in South Africa despite the presence of a large mining sector and so does today as it contributes more than 10 percent of formal employment opportunities (Vink et al. 2001). The sector, according to the source, has experienced a decline and today contributes less than 5 percent and a lower proportion of employment on average for a country at a similar level of development (Lipton, 1996). However, it should be clarified that the sector's output or contribution decline is a relative issue and that in general terms; its contribution has significantly increased. For instance, total contribution of agriculture to GDP at a factor cost in 1980 was 2.92 billion rand (World Bank Table, 1993) cited in (Poonyth et al. 2001). This figure has increased to 14.7 billion rand in 1998, an increase almost of 400 percent (Poonyth et al. 2001). Another point noteworthy in this connection is that treating agriculture as a single sector in the national aggregates might partly obscure the relative importance of agriculture on a regional as well as rural-urban basis. This is because of the possibility that a large number of other production activities, and especially manufacturing sub-activities, are dependent on agriculture as the destiny of their output and as a source of their input. This is known as the process of inter-sectoral growth linkages that results from agricultural growth. For example, the Western Cape and KwaZulu-Natal with contributions of 6.7 and 6.2 percent respectively to the provincial Gross Domestic Product (GDP), the agricultural sector appears less important but it is observed that the contributions of these provinces to the value added by the agricultural in the total economy was the largest of all the provinces at 18.3 and 18.0 percent (National Department of Agriculture, 1996: 37). As evidence of the importance of agriculture at district level the source cites a recent study, which showed that

agriculture in Warmbaths generated more than 30 percent of the GGP while at the same time absorbing 36 percent of the Economically Active People (EAP)².

2.4.2. Direct benefits

Agricultural sector's contribution to the South African economy can be assessed based on a range of indicators such as its role in providing food for consumption and food security at the national, regional as well as household levels at relatively low affordable prices, its relative contribution to the GDP, its share of the labour force (employment), and as a source of foreign exchange. In addition, there is an indirect form of agricultural contribution to the national economy. This can be estimated through the forward and backward linkages agriculture has with the rest of the economy.

2.4.3 Food contribution and food security

This is one of the very important areas where agriculture is supposed to make a contribution. With regard to the situation in South, as the National Department of Agriculture notes, the agricultural sector has succeeded to keep pace with the increase in population but in certain provinces such as the Northern Province the food security situation is different as the poor grain production in the province fails to keep up with the steady increase in the population in the developing areas of the province (National Department of Agriculture, 1996: 30). It is however, noteworthy that food supply and security are not just a function of agricultural production as is food self-sufficiency. A main concern here is about distribution especially for poor rural residents who spend a good deal of their incomes on foodstuffs. According to the source, this issue constitutes a real problem in South Africa where vulnerability regarding household food security is emphasized among certain groups. This is out of the scope of this paper; however, it is relevant to mention that part of the reasons for the overemphasis placed on the smallholder strategy to agricultural development is to address such equity concerns.

2.4.4 Employment

Here again, despite the fluctuations in the level of contribution of agriculture to employment in South Africa and thus its relative importance, the importance of the sector seems to be

²/ People of working age (15-65 years) who are available for work, and are either employed or unemployed (Stats, 2004: 10).

unquestionable. According to the National Department of Agriculture (1996), agriculture has traditionally been the largest employment sector in South Africa. From 30.60 percent employment of the E AP in 1970, it dropped to 13.20 percent in 1994 but nonetheless this is considered to be a significant share as it represents 1.28 million employment opportunities, which accounts for 40 percent of the 3.30 million workers (formal and informal) in the rural areas of South Africa (National Department of Agriculture, 1996).

A study undertaken with the aim of assessing whether the employment benefits of increased investment in agriculture are potentially high enough to warrant further stimulation of the sector seems to establish positive results (Vink et al., 2001).

The following table exhibits the number of people employed by the farm sector in the different types of employment, namely, regular and casual as well as seasonal.

Table 3: Farm employment in South Africa

	1985	1986	1987	1988	1990	1991	1992	1993
Regular employees	807341	816660	795283	724439	728414	702323	656772	647839
Casual and seasonal employees	516411	534781	559230	495209	456262	413239	394425	491588
Total paid employees	1323694	1351558	1354624	1219648	1184676	1115562	1051197	1139427

Source: Vink and Kirsten, 2001

Analysis of the table shows an increase of employment to 1986 and a sharp decrease to 1991. Interestingly, the gap in the years 1992/1993 has shrunk almost to a negligible level. This pattern is explained as likely being the result of the severe drought of the early 1990s, and the beginning of the current period of sustained economic growth (Vink and Kirsten, 2001). Seasonal employment, on other hand, increased to 1987, then dropped sharply to 1992, and then showed an increase in 1993,

which according to the source, was sufficiently large to cause an increase in overall employment in the sector.

As supporting evidence to confirm the above conclusion of an increasing employment trend in the agricultural sector, the author cites the October Household Survey which shows agricultural employment to have increased from 1 226 886 in 1994 to 1 229 515 in 1995. Though he notes that these data are not comparable with the above table for including the forestry and fishery sectors, he tends to infer an increase in employment “...nevertheless, they show that farm sector employment has at least not continued to decline, and may even have increased.” (Vink and Kirsten, 2001: 5).

2.4.5 Earning foreign exchange

This is one of the main and important benefits of agriculture particularly for less developed countries since it almost represents the only source for earning hard currency that is highly important for commercial transaction with the outside world. South Africa’s performance in this regard is far better than many countries and during the period 1980 to 1986 was ranked fourth in the world in terms of cost competitiveness in maize production and seventh in terms of wheat production (National Department of Agriculture, 1996: 45).

The following table displays South Africa’s agriculture sector share of the total exports and imports of the country for the years 1972-1994.

Table 4: Total RSA imports and exports of agricultural production (R’000)

Exports	1972	1976	1980	1984	1990	1994
Tot RSA exports	1 853 330	4 532 071	19 915 435	25 584 453	62 769 951	90 328 235
Tot agric exports	750 567	1 237	2 052 459	1 842 270	5 289 732	9 518 906
Processed	360 252	650 807	1 043 565	623 411	2 911 086	5 359 462
Unprocessed	390 315	586 633	1 008 894	1 218 859	2 378 696	4 159 444
Agric % of total exports	40.5	27.3	10.3	10.7	8.7	10.5
Imports	1972	1976	1980	1984	1990	1994
Tot RSA imports	137 911	291 967	369 161	1 682 040	2 203 303	752 692
Tot agric imports processed	86 752	165 234	210 742	828 403	1 661 758	6 565 111
Unprocessed	51 159	126 733	158 419	853 637	541 545	960 981
Agric % of total imports	5.3	5.0	2.6	7.7	5.0	9.5

Source: Directorate Agricultural Statistics, 1996

Analysis of the above table reveals that although agriculture's percentage of total exports declined its exports have eventually increased. These statistics are not updated and since then the situation may have changed especially under the neo-liberal policies introduced later whereby agriculture is left on its own without state support as used to be the case before. However, it is evidence of the potential and the possibility of the sector to make progress under favorable circumstances.

2.4.7 Indirect benefits

The indirect role of agriculture on growth is a function of the strong forward and backward linkages that the sector has with the rest of the economy. Manufacturing enterprises of fertilizer, chemical and implements are dependent on a growing agricultural economy. There are also consumption linkages as farmers and farm workers making adequate earnings under agricultural growth tend to spend their incomes in the local agrarian economy in the form of demand for construction, transport or other services and goods. An example of the scale of trading interactions resulting from such linkages indicates the large magnitude of these transactions is provided by Mathers and Adelzadeh in 1993/4 season, for instance, farmers spent over R500 million on packaging material, R1.6 billion on fuel, R1.18 billion on fertilizers and R1 billion on dips and sprays. In the early 1990s, only 34% of wheat farmers produced was consumed directly; the remaining 66% was processed in some form by the manufacturing sector." (Mather and Adelzadeh, 1998: 26)

2.4.8 Agricultural growth linkages

In South Africa, however, views tend to differ largely over the potential of the smallholder farming to stimulate additional non-farm rural livelihoods. Ngqangweni et al. (1998) holds a pessimistic outlook arguing that the magnitude of deprivation or impoverishment in rural South Africa is so deep that even substantial flows to overcome the constraints faced by farmers there would not help while Vink and Kirsten, (2001) show that agriculture has relatively large linkage effects in the South African economy. They however note that this depends on the extent to which the increase in production is matched by an equal local demand or export "...the only way in which agriculture can conceivably become a major creator of employment opportunities for the country as a whole would be through a wider and deeper export drive, i.e. through bringing large areas of KwaZulu-Natal and Mpumalanga into export production." Vink and Kirsten, (2001). The results of Hendriks et al.,

(2003) study analysis of agricultural growth multipliers for two communal areas of KwaZulu-Natal show that increased income could lead to an unproportional increase in demand for tradable farm commodities and more-than-proportional increases in demand for non-tradable farm, tradable non-farm and non-tradable non-farm commodities. In other words, there is substantial cash flow from the farm into the non-farm sector and much less the other way round.

2.5 The neglect of agriculture

The adoption of development strategies excluding and neglecting the agricultural sector in many developing countries (Griffin et al., 2002) and kind of policies that favor substantial flow of resources to the urban sector (Lipton, 1997 cited in Griffin et al., 2002) to the virtual neglect of the agrarian economy can only be explained within the framework of the economic development models followed by these countries. These models emphasize the importance of the urban industrial sector to lead the development process and maintain that this sector has the potential to absorb the excess rural labor whose marginal productivity is almost zero and that the agriculture sector is only important at the initial stages. As a matter of fact, almost all less developed countries ruled by the new elite class, followed a development path that placed too much emphasis on the rapid creation of a modern urban sector and industry. The rural areas where 90 percent of the Africans then lived were being neglected (Auty, 1995). Lipton explains this phenomenon within the larger frame of what he calls 'Urban Bias'. He points out that the actions of the powerful urban-based class, in almost all developing countries, have shifted the balance in favour of the urban areas (Lipton, 1982: 66). Agriculture, he notes, with 70 percent of workers and a share of 40-50 percent to GDP, has in most poor countries been under-resourced receiving only 20 percent of the investment. The current overarching economic development strategy in South Africa (GEAR) is a case in point. It is orientated towards favourable conditions for local and foreign investments in industry and tourism to create jobs and incomes (Cousins, 2000), and underpinned by the view that South Africa's future is metropolitan and industrial, and resources should be concentrated in major urban complexes" (Tomlinson cited in Hart, 1996). The explicit neglect and lack of recognition of the role of agriculture manifested in GEAR was a cause for surprise and concern for some such as Mather and Adelzadeh (1998: 29) "...it is remarkable that GEAR ignores the possible role of commercial agriculture in South Africa, given its prominent -albeit indirect- role in the economy."

2.6 Conclusion

In conclusion, the agriculture sector, especially is important in overall economic development especially for developing countries. This is not only through its direct contribution of product but also most importantly through its linkage with other sectors of the economy. Despite the neglect the sector experienced, it is still the largest employer in many third world countries suggesting that agriculture serves an important livelihood function.

CHAPTER THREE: AGRICULTURE AND INTERNATIONAL RURAL POVERTY

3.1 Introduction

This chapter examines the role of agriculture in addressing rural poverty. It starts with the changes taken place over the rural areas worldwide and South Africa/KwaZulu-Natal and the implications of this in terms of the possibilities for improved opportunities for livelihoods to rural residents, especially prospects for diversification into non-farming activities. The South African countryside past experience and its consequences is laid out in a detailed manner that reflects the scope of constraints and difficulties for rural development and poverty reduction efforts. The chapter then moves on to present a brief account about poverty in rural areas world wide and efforts to tackle it and concludes with a discussion on role and contribution of agriculture towards addressing it.

3.2 Rural areas in transition

It is difficult to provide an exact definition of the term rural. Different rural areas constitute different realities and as such can be characterized in various ways that bear certain implications with regard to the level of development or the potential and challenges encountering it. In terms of physical features they are those areas where human settlement and infrastructure occupy small portion within a landscape dominated by fields and pastures, woods and forest, water, mountain and desert (Wiggins and Proctor, 2001). These features represent a disadvantage as they pose difficulties in movement of people and goods and the diffusion of information especially through personal contact or by demonstration (eg. agricultural extension service) and hence makes transactions costly. While adding an important defining feature of typical rural areas by pointing out that rural people usually live in farmsteads or settlements of 5-10, 000 persons, IFAD (2001) notes that it is **practically** hard to set up a demarcation line between the rural and urban areas and that distinctions between the two are arbitrary and varied. This definition contrasts with the conventional one in essence and signals the process of change underway and, most important, has especial significance for the process of socio-economic development of rural areas. Other characteristics are that: the countryside is most often, particularly in Africa, associated with images of poverty; and the heavy reliance of people on natural resource-based livelihoods with agriculture traditionally being the prime economic activity. However, apart from the type of change hinted above in their physical make-up, rural areas have changed socio-economically as well. The agrarian economy has become more diversified with agriculture being one among other activities though still predominating “While agriculture is the

primary source of livelihood in most rural areas the agrarian economy is broader than agriculture, and poverty reduction strategies should assess how to increase non-farm employment as well as agricultural income” (The World Bank Group, 2002: 1). The rural space is not just a single or uniform entity. Rural areas can be placed along a gradation line of rurality starting with peri-urban, middle countryside and remote areas. These spatial dimensions have significant implications in terms of economic opportunities and development. In some areas, economic growth and urbanisation along with improved network of transport and communication create new economic opportunities for nearby rural settlements. Over time, these areas start to get more integrated into the urban economy through expanded business linkages and this will blur the urban-rural contrasts.

Rural reality is not what it was. Maxwell and Ashley (2001), note that rural areas are undergoing a process of change particularly in terms of their demographic composition or characteristics, the range of economic activities, which are increasingly becoming more diversified, and with respect to links to national and global economies. Bryceson (2000), observes changes taking place in the rural economic landscape allegedly under the pressure of high levels of uncertainty and risk, and notes that they have become more occupationally flexible, spatially mobile and increasingly dependent on non-agricultural income-generating activities (livelihood diversification). Describing the current rural situation, (Bryceson, 1996) introduces the terms de-agrarianisation to denote the long-term process of occupational adjustment, income-earning reorientation, social identification and spatial relocation of rural dwellers away from strictly agriculture-based modes of livelihood and de-peasantsation as a specific form of de-agrarianisation in which peasantries lose their economic capacity and social coherence, and demographically shrink in size. These changes, whether induced or a result of natural development, define the new or emerging reality in rural areas and very much affect their socio-economic development. One aspect that forms the economic part of this large process of ‘transformation’ is the phenomenon of livelihood diversification and its far-reaching effects on the peasants’ way of life and living conditions, the most striking and significant in terms of policy implication, as follows below, is the differential economic contribution of agriculture to individual producer’s livelihoods depending on the various income-group categories of rural producers.

3.3 World rural poverty

The generalizations that the bulk of the poor are located in rural areas, engaged in agriculture and associated activities, that they are likely to be women and children than adult males are valid (Todaro, 2000). He further observes that on average; about 80 percent to 90 percent of the poor in Africa and Asia are rural residents while for Latin America the percentage is 50 percent. Worldwide, the trend generally has been of a persistent increase in poverty rates (IFAD, 2001).

Poverty in sub-Saharan Africa continued its upturn trend and it is particularly great in rural areas, where the majority of the population lives (WDR, 2003). The Eastern and Southern region of Africa is made up of 21 countries with a total population of about 350 million. According to (IFAD, 2002), about 260 million live in rural areas (73%), and more than half of them live in extreme poverty. In the countries for which dollar poverty data is available, nearly half of their populations have per capita incomes of less than USD \$ 1 per day. The percentage of the population below USD \$1 is highest in Zambia (85 percent), Madagascar (72 percent) and Uganda (69 percent), whereas in South Africa it is under 25 percent (IFAD, 2002). According to the same source, 15 countries of the 21 in the region fall in the low-income category, with per capita incomes ranging from USD \$110 in Ethiopia to about USD \$470 in Zimbabwe. These are the countries with the most concentrated rural poverty in the world, and where the least progress is being made to achieve the 2015 targets. Overall, rural poverty accounts for 83 percent of the total extreme poverty in the region, which is consistent with the foregoing evidence.

The next table shows the percentage incidence of poverty for rural and urban areas for some Less Developed Countries within a given period of time. The statistics reveal a pattern of substantial poverty rates in rural areas for all countries compared to urban areas.

Table 5: Rural and urban poverty in selected LDCs

(Percentage of total rural or urban population)

Country	Year or Period	Poverty	
		Rural	Urban
East and South Asia			
Bangladesh	1995-1996	39.8	14.3
Cambodia	1997	43.1	24.8
Lao People's Democratic Republic	1993	53.0	24.0
Nepal	1995-1996	44.0	23.0

Source: IFAD Rural Poverty Report 2000, Rome (2000).

3.4 Efforts to reduce rural poverty

During the late 1980s and early 1990s, poverty problems became more visible and calls for social safety nets became more pronounced. Yet the need to make of poverty reduction as the central theme of the economic and social development efforts of governments was not yet acknowledged (IFAD, 2002). Factors such as increased awareness of the long-term impact of poverty on individuals, households and communities as well as the steady increase in the number of people with earnings less than \$1 a day since the 1990s (IFAD, 2001) pushed poverty to the top of international forums' and organizations' agendas which translated into worldwide efforts to roll it back. The most prominent of these was the United Nations Social Summit in Copenhagen 1995 (IFAD, 2001). In this gathering, member countries made a commitment to reduce the toll of poor subsisting on less than the daily minimum and those suffering hunger to the half by the year 2015. According to the World Development Report (WDR, 2003), the number of people living in extreme poverty has dropped significantly and the absolute number of very poor people also went down as the world's most populated country, China, which has experienced steady economic growth since 1980. However, these achievements were far below expectations. IFAD report 2001 notes that in South Asia and Latin America, the rate of poverty reduction in 1990-1998 was barely one third of what was needed. The same source goes on to indicate the huge gap between the two ends in sub-Saharan

Africa where the rate of poverty reduction is set at a point six times too slow. According to IFAD (2001), the number of people living in extreme poverty in the globe has mounted to 1.2 billion today and that the overwhelming majority of this (75 percent) live and works in rural areas. It is anticipated that this trend will persist over the coming decades. The figure below shows an updated percentage distribution of poverty for Third World countries

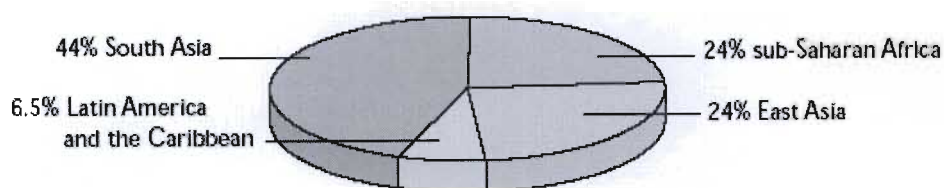


Figure 2: Global distribution of poverty

To conclude, even though the proportion of the population in rural areas worldwide is expected to drop by the year 2030, the absolute number of people living in the countryside is expected to increase by about 30 percent by that same year, reaching some 338 million (IFAD, 2002). Todaro (2000) indicates that in spite of the massive migration to the cities, in absolute terms, third world nations will witness an increase in rural population greater than that of urban areas for at least the next decade. This is another way of saying that rural poverty will not go away as a result of urbanisation (although urban poverty may rise as a result of rural poverty causing migration to urban centres), and without serious, concerted efforts, the absolute numbers of rural poor will almost certainly increase (IFAD, 2002).

Major challenges facing the development of rural areas worldwide are: spatial dispersion; economic dependency on urban areas; political marginalization and taxation and inappropriate macro-economic policies leading to a net outflow of resources. The net effect of these combined together is the economic and political inability of rural areas to mobilize sufficient resources to finance their development programmes, leaving them dependent on transfers from the centre (IFAD, 2002). In South Africa, efforts to reduce rural poverty through formal sector employment have fallen far short of expectations. The macro-economic strategy aiming at poverty reduction through economic growth

generating employment opportunities has yet to deliver in terms of generating employment opportunities (Aliber, 2003: 487). South Africa has a number of features such as high urban unemployment, a high rural proportion of population and a high proportion of workers with little education that tend to exacerbate the rising tide of poverty especially among the rural areas. For the approach of formal sector jobs creation to be feasible, the one-sector development strategy has to achieve an exceptionally higher rate of economic growth reflected into an equal rate of urban jobs which, according to (Lipton et al., 1996) is questionable at least in the short run.

3.5 The contribution of agriculture to world poverty reduction

Highlighted among the characteristics of poverty and poor people are those that deal with inadequacies of necessities essential for sustenance such as secure access to sufficient staple food to avoid hunger and malnutrition, employment (wage work) and livelihood or income for non-cash needs. A systematic investigation of the agricultural growth-poverty relationship requires identification of the main channels through which agricultural growth impacts poverty and an understanding of the conditions under which these channels operate effectively. The importance of agriculture for poor people lies in its potential ability to satisfy the above needs providing there are the natural agricultural resources and the capacity of individuals to utilize and convert it for meeting these needs. Mechanisms include:

- A general equilibrium effect through the increase of unskilled labor wage rate and employment
- An increase in the income of smallholders
- Lower staple food prices resulting from higher agricultural output and
- Forward/backward linkage effects that spur non-farm income growth and investment in agro-industries and other down stream activities. (IFAD, 2001).

The potential for agricultural growth to alleviate rural poverty is demonstrated or exemplified by the large amount of people involved in farming as the main activity for their livelihoods among others especially in the absence or underdevelopment of the rural non-farm sector. Agriculture is the predominant economic activity in the economy of rural areas and virtually constitutes the only option and source for the poorest incomes and food entitlements (FAO, 2001). According to the source, it employs about 75 percent of the total labour force. This basically applies to the poorest and

less developed countries where the poverty aspects underlined above are widespread at high percentages and often combined, namely, low incomes, food insecurity or deficit and high external indebtedness (FAO, 2001).

Agricultural growth helps to reduce poverty both directly through increased production of output for household food security (subsistence), or sale of surplus for income and indirectly through expanding the agricultural direct labour market on farming operations such planting, weeding harvesting, agriculture irrigation system works and indirectly through input, output and consumption linkages with the non-farm productive activities in the rural sector. This is equally or most important especially under circumstances of arable land shortages. According to IFAD (2003), there are two types of Rural Non-Farm Sector (RNFS) activities. The first one is the traditional kind of rural non-farm work, reflecting family skills, shortage of land or the need to diversify against seasonal unemployment or annual drought risk. They are linked to poverty. The other type is the modern linkage-based RNFS. Examples are activities such as construction, transport and shops. They are more likely to arise and prosper under widely shared agricultural growth that generates rising demand for local RNFS activity (IFAD, 2003). Econometric studies of the connection between sectoral indicators too support this argument. Ravallion and Datt (1999) cited in (Kydd et al., 2004) found significant differences across Indian states in the extent to which the poor have benefited from non-farm economic growth. According to study, poverty elasticity was greater in states with higher initial farm yields, higher levels of urbanisation, lower disparities between urban and rural average consumption levels and higher levels of literacy. The elasticities of poverty with respect to increased farm yield, by contrast, do not differ significantly across states, leading authors to conclude "...it is differences in agricultural growth rates rather than initial conditions that matter" (Kydd et al., 2004: 47). A very important implication of this study is that there are no guarantees that the poor will benefit from non-farm urban-based economic growth. This is influenced by a range of factors major ones of which are the level of human capabilities, degree of integration of rural and urban labour markets, degree of urbanisation and many others. Agricultural growth, on the other hand, benefits a broad spectrum of people including the rural and urban poor.

Recent research shows that the poor benefit from growth in agriculture much more than from any other sector. It is noted that "a one percent increase in agricultural yields reduces the percentage of people living on less than \$1 per day by between 0.6 and 1.2 percent. No other economic activity

generates the same benefits for the poor.” (Irz et al., 2001 cited in DFID, 2003). In some African countries where agricultural performance had recently improved, such as Uganda, Ghana and parts of Ethiopia, according to IFAD, poverty rates had decreased proportionally (IFAD, 2001: 31).

However, it is important to note that the poverty impact of agricultural growth depends, among other things, primarily on the pattern of agricultural growth and the agricultural system. This brings into play the debate about the smallholder farming versus large-scale approach. For reasons briefly outlined in the introduction, there is a consensus that small-scale farming is more beneficial to the rural poor for its potential to enable them achieve these objectives particularly income and employment through its labor-intensive nature and its capacity to initiate and activate the rural non-farm sector by means of establishing intersectoral growth linkages (IFAD, 2001; Lipton, 1996). That said, it is, however, important to note that agriculture’s role here is temporary and for the short-run. It provides the basis for livelihoods and the foundation for the rural non-farm sector (RNFS). This constitutes the first stage in the sequence of transformation for enabling migration that is not poverty-induced, urbanization and the secondary sectors to take over and provide employment for the steadily increasing rural population. Thus, when countries develop and become richer, the agriculture sector, as a result, loses ground and is relegated to a lower position in the economy but as the DFID (2003) notes, that doesn’t mean a sign of agriculture failing.

3.3. Rural South Africa/KwaZulu-Natal

The legacy of past policies and practices of Apartheid South Africa produced a distorted rural landscape with unique configuration that is hard to match or fit the conventional visions of the rural space described earlier. Shackleton et al., observe “...in SA, in particular, the peculiarities of our past have resulted in a very different rural reality for much of the population.” (Shackleton et al., 2000: pp) forced removals combined with lack of access to markets, inadequate infrastructure and support services caused the virtual elimination of small-scale black agriculture and, as a consequence, the whole sequence of development processes supposed to be initiated under normal circumstances by this action did not take place. These are the development of a viable, employment-intensive agrarian economy centred on agriculture and the usual vibrant and wide range of informal business activities created through linkages induced by agricultural growth (Van Zyl et al., 1996: 5). The net result of this situation was underdeveloped agricultural sector and agrarian economy and understandably increased poverty both rural and urban (Van Zyl et al., 1996). The range and

magnitude of the present socio-economic structural problems rural areas have been and are still experiencing today, such as high unemployment and poverty rates, could largely be attributed to or blamed on these policies. Concerning the question what constitutes a rural area in the South African context, some of the characteristics are that:

- There is a marked dichotomy between the former white commercial farming areas that match the common stereotype of rural areas and the former ‘homeland’ communal areas.
- In these areas, human population densities are high, settlement are often large and sprawling, infrastructure non-existent. The population of rural areas, according to the Integrated Sustainable Rural Development Strategy (ISRDS), make up 45 percent of the total and that 85 percent of this live in the former homelands and the rest on commercial farms and in the small towns. The source further notes the domination of commercial agriculture as it occupies 85 percent of land in the countryside and the population pressure, in turn, in the former homelands resulting from the high densities mentioned above, the consequent depletion of natural resource base there and the little number of communities able to derive a living from these resources (ISRDS, 2000: 28). In these areas scarcity of arable land and environmental impoverishment rather than greenness are part of the rural scene (Shackleton et al., 2000).
- As expected, households in these areas generate cash income that are much lower than the urban households or their commercial farming neighbours and many of them fall below the poverty line (Shackleton et al., 2000).
- As a consequence, to make up for the deficit in their subsistence, people are forced to look for other means of livelihood and employment. This is only possible by means of migration to towns and cities creating, thereby, strong linkages and dependencies for the majority of households (ISRDS, 2000; Shackleton et al., 2000: 35).
- And that the level of interdependence between rural communities and distant large cities is higher than else but the ISRDS correctly point out the fact that the linkages between rural areas and the towns near them are much less strong and organic than usually is all of

which contribute to the complexity and uniqueness of the situation (ISRDS, 2000). May et al., (2000) indicates the changes taken place in the South African countryside that created a rural reality, he suggests, would be more appropriate to describe and think of as more diverse than simply comprising two agricultures as is usually thought of. In addition, it is noted that many households occupy a middle place between the urban and rural and that the metropolitan and rural economies are strongly linked which implies a different continuum that contrasts with the traditional image of duality or dichotomy as two somewhat separate entities.

This particular experience or pattern of rural South Africa reveals a number features and facts that had a long-lasting impact on the process of rural development or the quality of living conditions in these areas in general and the role of agriculture as the most important sector traditionally. First, the rural-urban links seem to be a one-way relationship manifested in the steady flows of migrants to urban areas and the dependency created as a result represented in the critical importance of the remittances for rural households. The second point, closely connected to that, is the anomaly of diminishing role of agriculture in rural areas and as Shackleton et al., notes, the tendency of people to underestimate its value for rural livelihoods. They comment: "...however, the picture of high human populations, declining resource availability and high migrancy rates, has resulted in a tendency to understate the role of agriculture and natural resource harvesting as important attributes of rural livelihoods in South Africa" (Shackleton et al., 2000: 37)

3.4 Rural poverty: South Africa/KwaZulu-Natal

South Africa, though classified as a middle-income country, ranks relatively high in terms of poverty rates. A review of poverty in South Africa shows that a substantial proportion of the population is living in poor conditions (SAHR, 2000). Poverty in South Africa is largely the outcome of the Apartheid era. This particular experience of colonialism and Apartheid holds no less for the causes of poverty in this country (Aliber, 2003). The legacy of this policy, which was pursued over a long period of time, is deeply entrenched and very pervasive in all aspects of life in South Africa today. It included such things as land dispossession, the imposition of taxes, the denial of skills and business opportunities and others (Schirmer, 1999). The deprivation of the rural people from land, labor, and opportunities led to the breakdown of the livelihood system of rural households. The net result was an African majority that was landless, propertyless, with low education and skills levels, desperately

poor and victims to the many diseases of poverty particularly in the homelands (Francis, 1999 cited in Schirmer, 1999).

Within countries poverty is largely associated with rural areas and rural people particularly in the developing world. Ashley and Maxwell note that "...poverty is not only widespread in rural areas, but most poverty is rural, at least for now." (Ashley and Maxwell, 2001:395). The spatial spread of poverty in terms of area types in South Africa is also unequal. The vast majority of the poor in the country live in rural areas, where the incidence and intensity of poverty is usually higher than in the towns. Rural KwaZulu-Natal is no exception and "... using a 'poverty line' of R750, 00 per month for a household of five people, 44 percent of households in rural KwaZulu-Natal can be said to have a livelihood that is insufficient to prevent its members from poverty" (May, 1996: 8). The burden of poverty among provinces too is highly skewed and the site of my enquiry, namely, KwaZulu-Natal, has the largest concentration of poor people in South Africa. Carter and May, (1999) note that although it is not the first nation-wide, KwaZulu-Natal has the highest incidence of deprivation in terms of access to services and perceived well-being. The state of infrastructural development is a relative measure of development in any province. The household infrastructure index and the household circumstances index are two development indices developed by Statistics South Africa to describe the level of development across provinces. Using the household infrastructure index, KwaZulu- Natal is the third worst province after Eastern Cape and the Limpopo. According to another index, it is noted that "KwaZulu-Natal, with its large population and thus its large number of households, as well as its large average household size and high unemployment rate ranks as the second most needy province in terms of improving the life circumstances of households." Hirschowitz et al., (2002: 70). Recent poverty studies in this province confirm not only the high incidence of poverty but also the large variations among the poor in terms of severity/depth of poverty. Roberts, (2001) notes that of those classified chronically poor 87 percent are located in rural areas, 9 percent in urban areas and 4 percent in the metro areas (Roberts, 2001).

3.5 Importance of agriculture to rural poverty in South Africa/KwaZulu-Natal

The contribution of agriculture to the agrarian economy and livelihoods is quite negligible. May (1996) notes that self-employment in agriculture generates the smallest share to the total household income. Part of the reasons is attributed to the Apartheid era, which witnessed the relocation of small African farmers to the poor 14 percent reserves of total land (Lipton et al., 1996). An important

explanation also relates to the rural-urban dynamic. This aspect has been quite detrimental in the South African case whereby rural people, dispossessed of land, had no alternative but to migrate to urban centres in search of wage work under poor working conditions and very low wages leaving behind children and elders. This certainly affects the scale at which rural areas can engage in productive agriculture for purposes other than just subsistence (Zulu, 1996).

Farming is a widely practiced economic activity in rural South Africa. Almost all households in the former TBVC states and self-governing territories grow maize as well as other crops such as sorghum, millet, cowpeas and others (National Department of Agriculture, 1996; Shackleton et al., 2000). Along the same lines Irz et al. (2001) states that the majority of the rural poor in South Africa are involved in subsistence agricultural activities and that it accounts on average for roughly one sixth of total household income and that 75% of households earn an income from crop production.

The agricultural land area in KwaZulu-Natal consists of 20 percent potentially arable land of which 13.1 percent could be regarded as high potential land suitable for dry land cultivation of which 120 000 ha is irrigated, 5.1 percent are forests. The grazing land equals 59 percent of the total land size and the ratio of crop land relative to natural grazing is high compared to the rest of South Africa (DBSA, 1998: 81). However, these resources are not contributing what they need to contribute to rural livelihoods at present, and have not been for sometime (Cross et al., 1996). For instance, Hatch (1996) sets agriculture's contribution in the province at 5-10 percent.

Hatch (1996) argues that despite the apparently small cash contribution that agriculture makes to the agrarian economy, livestock and cattle in particular play an important role in the lives of people in the former KwaZulu through direct provisioning as part of the rural safety net. They supply a range of goods and services, including milk, manure, draught power, meat, dung as fuel, ceremonial and customary uses and important to sell in times of adverse circumstances such as retrenchment, death of a bread winner or divorce. A minority, 15-30 percent of households own cattle. But the benefits of this are multiplied and shared between the haves and the have-nots through a number of mechanisms including bride-wealth payments, loaning of animals, co-operative ploughing arrangements and others (Shackleton et al. 2000). From the above, a part from the direct material benefits, there also seems to be a perceptual dimension that is not captured by questionnaire surveys and that may have significance in terms of how rural producers view or perceive their potential economic

opportunities and uses for livelihoods generation based on their capabilities, the stock of assets they possess, risk levels and others. In contrast to livestock ownership, the source confirms that the majority of rural households engage in some form of arable agriculture. This comprises one or more of a range of activities extending from cultivation of home gardens within the homestead, planting of larger field crops within the vicinity of the village on to small grower and settlement schemes. The SA-PPA, May (1998) notes that gardening is undertaken as a hedge against the lean season and serves a critical supportive function at particular times of the year. However, it is noted that cultivation of crop fields or gardening is probably limited to areas with sufficient rainfall to permit rain-fed farming.

The net social benefits of improved nutrition are undisputed. Agricultural growth enhances the nutrition benefits and status of rural people. An increase in farm and non-farm income and lower prices of foods would allow the rural poor to meet their energy requirements. Studies indicate that a good part of incremental increase in rural households income is likely to be spent on local horticultural products (fruit and vegetables), meat and poultry products besides imported goods (RoA, 2003). Lack of availability and limited range of foods and the monotony of most rural diets, according to Maunder et al. cited in (RoA, 2003) cause or contribute to vicious cycle of low energy intakes exacerbated by reduced micro-nutrient intakes. This could be addressed through higher agricultural growth by increasing dietary diversity.

The table below shows an assessment of land-based livelihoods in cash in communal areas.

Table 6: Household and Aggregate Economic Values of Land-Based Livelihoods in Communal Areas (with total population of 2.4 million households)

Component	Current Value per Household per Annum	Current Aggregate Value per Annum
1. cropping	R1 543	R3.70 billion
2. Livestock Production	R1 200	R2.88 billion
3. Natural resource harvesting	R2 792	R6.70 billion
Total	R5 535	R13.28 billion

Source: Adams, Cousins & Manona, 1999

3.6 Conclusion

To summarize, the majority of the world's poor are rural residents. Progress made over the last decade to reduce poverty is negligible considering the magnitude of the problem. Research suggests that agriculture has potentially a great role to play towards not only reducing rural poverty but also the development of rural economies and particularly the non-farm sector. Furthermore, the poor are said to benefit most from growth in agriculture than any other sector.

In South Africa, despite relative high urbanisation, a similar situation is found. The majority of rural people practice farming and poverty is concentrated in rural areas. However, the neglect of traditional agriculture in the past hindered the development of the sector and negatively affected its livelihoods contribution to rural residents. Hence, to secure sufficient livelihoods, rural producers engage in a number of other activities besides agriculture such as wage work, petty trading and others.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 Introduction

This chapter first defines the survey as one of research strategies. It then presents the methodology adopted in the study and a description of the data set. The study is based on the KwaZulu-Natal Income Dynamics Study (KIDS). The chapter, thus, provides detailed information about the data source and other relevant aspects as well as its appropriateness for this research.

4.2 Research methods

The study approach makes use of data from a questionnaire survey. Surveys are characterised by having a structured or systematic dataset. They may be used for various purposes such as descriptive, exploratory and explanatory. Functionally, surveys can be descriptive or analytic (Oppenheim, 1992: 12). The purpose of the descriptive survey is to count, answering ‘how many’ and ‘what proportion’ questions whereas the analytic one is relational and “unlike the descriptive survey attempts to explain the relationships between experimental, dependent, controlled and uncontrolled variables” (Oppenheim, 1992: 21). The statistics resulting from these surveys are thus different: descriptive survey produces descriptive statistics and it summarises patterns in the responses of cases in a sample. On the other hand, analytic surveys produce inferential statistics the function of which is to provide an idea about whether the patterns described in the sample are likely to apply in the sample’s population (De Vaus, 1985).

In order to test the hypotheses, the study uses the KIDS dataset supported with secondary data from other research. Using descriptive statistics such as the mean and median, it is first established quantitatively how much income rural households generated from farming in both years 1993 and 1998. This is intended to detect temporal changes in the form of variations in the amounts of income

earned from the sector over the period and conclude whether it is rising or experiencing a decline. The second step involves working out the contribution of farming relative to the other means of income to find out where farming ranks among these sources. The significance of this part links to the tendency of rural producers to diversify into other non-agricultural activities under conditions of poor productivity and returns from farming and the emergence of some voices calling for and advocating this trend and the implications of this with regard to the future of the sector. The last section looks into the question of association between farming households and poverty. In other words, to establish how likely it is that farming households are poor or not compared to non-farming households. The significance of this consists in answering the question of dominance of this activity among the different type of households and the poor in particular. The second hypothesis of the study is more difficult to test making use of the empirical dataset directly and is thus approached differently. The analysis relating to the first question (the above three sections) are perceived to constitute the basis for inferring insights indicating the significance of agriculture in terms that emphasize its different features and potential as a sector. This is carried out within the analytical framework of Sustainable Livelihood (SL), which the study adopts for informing its strategy of how to reduce rural poverty. Applying this framework, the study attempts to argue and show that agriculture is the activity most 'fit' for being an entry point and focus of poverty reduction efforts.

4.3 Description of Dataset

KIDS is a panel survey developed from a national survey that was undertaken in 1993 in all provinces of South Africa. A growing recognition of the limitations of analyses of social life based upon static, cross-sectional data has brought about a corresponding increase in the longitudinal data available for secondary analysis (Dale and Davies, 1994). This is the reasoning that underpinned the second wave of the panel study KIDS. It was developed in response to the perceived neglect of poverty dynamics studies in Africa. In brief, the objective of the study was to collect and analyse follow-up data on an important subset of the households in the Project for Statistics on Living Standards and Development 1993 (PSLSD) survey, namely, those in the KwaZulu-Natal province, in order to understand the dynamics of poverty. One of the considerations the decision of choosing KwaZulu-Natal predicated upon was the fact that the 1993 survey identified Africans living in KwaZulu-Natal as the most severely deprived grouping, using a multi-dimensional definition of poverty (Klassen, 1997).

The principal survey instrument, a comprehensive household questionnaire, contained information on a series of subjects, inter alia household demographics, education, remittances, employment and income, agricultural activities and health. The resurveying process, which occurred between March and June 1998, has led to the creation of a longitudinal or panel dataset. Recognizing the importance of maintaining continuity and comparability with the (PSLSD) statistical output, the original survey instrument was adopted, but with some modifications. Of the 1389 KwaZulu-Natal households in the PSLSD sample, a total of 1178, equating to 85 percent of the original sample, were re-interviewed. The unit of analysis was the household, which for the purposes of the study was defined as one or more families, or a group of two or more persons dependent on a common income, and usually living in the same house. Also included were family members living away from the household such as migrant workers.

This research makes use of the KIDS dataset 1993-1998 on KwaZulu-Natal. So it is based on secondary data source. Secondary analysis involves the utilisation of existing data, collected for the purpose of a prior study, in order to pursue a research interest, which is distinct from that of the original work. This may be a new research question for a separate independent inquiry or an alternative perspective on the original question (Heaton, 1998). As Haley (1996) notes, the challenge with secondary data is to make sure that the data is appropriate for addressing the research questions or hypothesis. For the purposes of this study, the dataset used (KIDS 1993-1998), is regarded appropriate for containing the relevant sections/files on the different areas needed. These relate to variables on incomes from agriculture, remittances and pensions as well as others on the two component comprising agriculture, namely, arable farming and livestock production such as farm size, land under irrigation, crop fields, number of mature livestock units and others. Those files are extracted from the original datasets of 1993 and 1998 and merged together on a new single dataset that is used for running the statistical tests for this study.

4.4 Conclusion

Panel data offers a useful instrument with which to analyse the impact of agricultural production. The KIDS study from KwaZulu-Natal provides information from 1993 and 1998 and will be used for this dissertation.

CHAPTER FIVE: ANALYSIS AND FINDINGS

5.1 Introduction

As stated in the introduction chapter, the research question the paper sets to address and finally answer is the relative importance of agriculture for rural households' livelihoods in KwaZulu-Natal compared to other sources particularly those involving productive activities such as wage labor and non-farm self-employment. The task in this chapter specifically is to test the hypothesis that: although measured farm income is insignificant, agriculture's contribution to rural livelihoods is important for poverty reduction.

The chapter begins with an outline about the agricultural resources of the province. The structure of the chapter involves analysis and interpretation of empirical data on KwaZulu-Natal and presenting evidence towards showing the actual progress made in agriculture's share to rural households livelihoods in measured terms over the period 1993 to 1998. It is established by quantifying the range of direct consumption and service benefits that rural producers gain from farming. Estimation of the flow of benefits is carried out purposely in absolute as well as in relative or comparative terms to measure and show the increase in agriculture's contribution independently and in proportion to the total household income. There is a final section on the characteristics of producing households. This involves a crosstabulation of some variables relating to wage labor and sources of income such as remittances.

A real assessment of agriculture's contribution to rural livelihoods, in particular, and to the development of the agrarian economy in general in KwaZulu-Natal should go beyond the simple calculation of measured output. It should include the sector's potential for making measurable contributions in the near future that might also include investments and growth as well as its 'immeasurable' short and long-term or strategic importance. Such an approach is critical for estimating the real value of the sector's actual and potential contribution and reflecting its significance to rural livelihoods and economy. A shift in thinking and attitude towards the sector is required to facilitate the adoption of this method. The second part of the analysis attempts to approach the question from such a perspective or along these lines and attempts to prove this based on statistical analysis of the same dataset.

5.2 Agricultural potential in KwaZulu-Natal

The agricultural land area in KwaZulu-Natal consists of 20 percent potentially arable land of which 13.1 percent could be regarded as high potential land for dry land cultivation of which 120, 000 ha is irrigated, 5.1 percent are forests. The grazing land equals 59 percent of the total land size and the ratio of cropland relative to natural grazing is high compared to the rest of South Africa (DBSA, 1998: 81). KwaZulu-Natal has substantial natural resources and a reasonable number of rural people have access to land. The table below shows the province's biggest share in the distribution of medium potential cropping areas by a sample of some provinces in the country.

Table 7: Agricultural potential

Province	low potential (‘000ha)	high potential (‘000 ha)
Eastern Cape	2528	5285
KwaZulu-Natal	1160	8015
Northern Province	5910	4181
North West	4213	3691

Schirmer, 2000

Schirmer (2000) observes that in the year 2000, in KwaZulu-Natal 53 percent of African rural households had access to land for the cultivation of crops an amount that is more than twice the incidence of land holding by rural African people in the rest of the country. Farming, as indicated above, at present occupies relatively a lower place in the order of the various income sources making up the rural households livelihoods package in the country. This might not apply to all provinces but it is the case in KwaZulu-Natal despite its relatively ample agricultural. May (1996) notes that self-employment in agriculture generates the smallest share of total household income. This could be attributed to the inability of poor rural households to afford the kind of investments essential for raising farm productivity, to the small plot size, the land quality or possible measurement error.

5.3 Agriculture, producing households and poverty: Changes 1993-1998

As already discussed, the KwaZulu-Natal Income Dynamics Study (KIDS) is a panel data set that allows for these ideas to be empirically tested. Of the original number of 1389 households covered

in the first wave of this study in 1993, a total of 1178 were re-interviewed in the 1998 longitudinal study of KwaZulu-Natal. This dissertation focuses only on the rural areas of the province, for which the sample size is 806 households.

The following table shows poverty incidence among households in the total sample for the years 1993 and 1998. Results reveal that the percentage of poor households had jumped from a level of 33 percent in 1993 to 54 percent in 1998, that is, over half of rural households entered into poverty by 1998³.

Table 8: Poverty incidence 1993 & 1998

		1993 Poverty		1998 Poverty	
		Frequency	Valid%	Frequency	Valid%
Valid	Not				
poor		540	67.0	308	46.1
Poor		266	33.0	360	53.9
Missing					
system		0	0	138	0
Total		806	100	806	100

NB: highlighted figure (138) represents households interviewed in 1993 but not in 98.

They could not be found.

Total rural household income in constant 1993 prices increased twofold from an average of R870.30 in 1993 to R1442.11 per household in 1998. Normally this would translate into better or improved living conditions and could even lift some portion out of poverty because of close association between the two variables. But as explained above the results show a significant increase in the percentage of households entering the poverty zone in 1998. The implication of this is that there has been widening inequality with incomes increasing for the not poor while decreasing or remaining the same for the poor.

³ The poverty line is derived from Carter and May (2000) and is a scaled expenditure based line that adjusts for household size and composition. For more information, refer to Carter and May (2000).

Agricultural production had increased between 1993 and 1998. The percentage of producing households increased from 49 percent in 1993 to 65.3 in 1998. In terms of the changes in production of poor and not-poor households, the next table displays the percentage changes in poverty among producing and not-producing households for 1993 and 1998. The table reveals interesting results regarding changes in poverty incidence among these households.

Table 9: Agricultural production and the incidence of poverty (1993 and 1998)

% within 93 & 98: poverty

		93: Poverty		98: Poverty	
		Not poor	Poor	Not poor	Poor
93 & 98: Agricultural					
Production:	No	45.20%	63.20%	32.10%	36.90%
	Yes	54.80%	36.80%	67.90%	63.10%
Total		100.00%	100.00%	100.00%	100.00%

N=806

The table shows a large increase in the percentage of not poor people farming in 1998 compared to 1993. Of more and special significance, however, is the marked increase in the percentage of producing poor households from 37.0 percent in 1993 to 63.1 percent in 1998. The difference is found to be statistically significant at a level of (0.95) for both years. It can thus be concluded that agriculture embraces a high percentage of households from both types of household -not poor and poor- but suggests a measure of significance for the sector in rural livelihoods particularly for poor people.

The dynamic nature of rural livelihoods is reflected in the constant process of livelihoods reconstitution. Agriculture, as one of the components comprising the livelihood strategy, undergoes a continuous change in terms of the number of households moving in or out of the sector and their composition with regard to wealth, sex of head, expenditure or otherwise.

The following table shows the agricultural transitions of the sample and the percentages of households in the not poor and poor categories that experienced either, some or all of these activities in 1993 and 1998. Agricultural transitions refer to whether the household was engaged in agriculture

in neither year, was engaged in 1993 but not in 1998 and thus exited agriculture, not engaged in 1993 but was engaged in 1998 and thus entered agriculture, and finally, engaged in agriculture in both years.

Table 10: Agricultural Transitions and Poverty
 % within 93* and 98* poverty

Agricultural Transitions 1993-998	Poor 1993	Poor 1998	Not Poor 1993	Not-Poor 1998
Neither year	28.0%	24%	20%	21%
Exited agriculture	10.4%	13.1%	13.1%	11.4%
Entered agriculture	29.4%	24.2%	23.4%	27.0%
Both years	32.2%	39.0%	44.0%	41.2%
All households	100.0%	100.0%	100.0%	100.0%

N=806

Results indicate a decline in the percentage of poor households farming neither year from 28 percent in 1993 to 24 percent in 1998 while it shows an insignificant change for the not-poor households. An interesting result is the similar trend of change but at much higher percentages in the ‘Both years’ category. The number of poor households producing both years witnessed a significant increase especially for the poor as it went up from 32.2 percent in 1993 to 39 percent in 1998 while the percentage of the not-poor households, in contrast, declined to 41.2 percent in 1998 from a level of 44 percent in 1993.

Test results exhibits equally interesting pattern of change among households in the ‘Exited and Entered agriculture’ agricultural transitions groups. Of those households that exited agriculture, the percentage of poor showed slight increase while that of the not-poor a similar decrease. Of significance, however, are changes in the ‘Entered agriculture’ group. The percentage of the poor households that entered agriculture considerably declined to 24.2 percent in 1998 from a level of 29.4 percent in 1993 while the percentage of not-poor households, in contrast, showed a similar positive increase to 27 percent in 1998 from 23.4 in 1993. The difference is found to be statistically significant at a level of (0.95) for both years.

It can thus be concluded from the table that poor households tended to maintain agriculture over the period 1993-1998 while a large number of not-poor households started agriculture in 1998. Considering the low returns from farming for the majority of producing households, this may suggest lack of alternative much more than real prospects for good business and profits in agriculture although few households generate considerable earning from the sector.

The next table shows the agricultural transitions of the sample and the incidence of poverty in each of these groups in 1993 and 1998.

Table 11: Agricultural Transitions and Incidence of Poverty (1993 and 1998)

% within agri activities 93-98*

Agricultural Transitions 1993-998	Poor 1993	Poor 1998
Neither year	39.3%	57.3%
Exited agriculture	26.8%	57.3%
Entered agriculture	36.7%	51.5%
Both years	25.5%	52.4%
All households	32.0%	53.9 %

Of the total sample, the percentage of rural households that were poor increased from 32 percent in 1993 to 54 percent in 1998. In general, over the period 1993-1998 all types of households in the agricultural transition categories showed dynamism in terms of the percentage of households that were categorized as poor. Nonetheless, there are some significant differences between the performances of households in the different categories. For instance, the percentage of households producing agriculture in 'Both years' that were poor witnessed a large increase as it jumped from 26 percent in 1993 to 52.4 percent in 1998. Another outcome of significance is the sharp increase in the percentage of households among those that exited agriculture who were poor, from 27 percent in 1993 to 57 percent in 1998. This is somewhat offset by the increase in the percentage of those entering agriculture who were poor which mounted to 52 percent in 1998 from a level of 37 percent in 1993. The difference for all these changes is found to be statistically significant at a level of (0.95) for both years.

It can thus be concluded from this table that while poverty rates increased for all agricultural transition groups, those who entered agriculture were more likely to be poor than the other groups in 1993, although this category of producers had the lowest incidence of poverty in 1998. This suggests that agricultural production may have acted as a livelihood net for these households. This finding is supported by IFAD who report that the majority of the poor in the world, about 85 percent are engaged in agriculture to a greater or lesser extent for their livelihood (IFAD, 2001).

5.4 Changes in household's agricultural income: 1993-1998

According to FAO (2001), over the past decade agricultural production including food production, has not kept pace with population growth in LDCs as a whole. This is despite an increase in agricultural output during the period 1990-1999 at an annual average rate of 2.5 percent, exceeding the rate in the previous decade. The report notes that, in per capita terms, there was virtually no increase in output and that the situation was the same for per capita staple food production.

In South Africa, agricultural production has only picked up recently after years of decline due to severe drought in the early 1990s (Vink et al., 2001). However according to (Poonyth et al., 2001) the sector's contribution decline is true only in relative terms but generally its output has significantly increased. For instance, citing (World Bank Table, 1993), the authors point out that total share of agriculture to GDP at factor cost in 1980 was R2.92 billion and that it has mounted to R14.7 billion in 1998, an increase of almost 500 percent. But the sector's performance in terms of employment showed a downturn. The source points out that the number of people employed by the sector declined from 1.2 million in 1980 to approximately 914, 500 in 1996 (Abstract of Agricultural Statistics, 2000 cited in (Poonyth et al., 2001).

Empirical data on total sample of rural households surveyed in both years in KwaZulu-Natal, however, reveals a slight decline in average total farm income in constant 1993 prices from R74.0 per household in 1993 to R60.11 in 1998. However, the difference is found to be not statistically significant at a level of (0.95) which means, in other words, that there has been no change in the level of farm cash income over the period 1993-1998.

Table 12: Agricultural household Income Average 1993& 1998.

	Aginc 1993	Ainc 1998
N valid	806	668
Missing	0	138
Mean (all rural hhs 806)	74.05	60.11
Median	.0000	.1847
SE	14.557	9.576

N=806

Applying the same technique for those actually producing and receiving a positive net income from the total sample reveals a more substantial difference in the amount of farm income earned in the two years. But the difference again is found to be statistically not significant (table below).

Table 13: Agricultural Household Net Income Average 1993 & 1998
(for producing households only)

	Aginc 1993	Aginc 1998
Mean (producer hhs only)	151.49	111.24
Median	55.14	16.67
SE	29.29	17.449
N =	394	436

Thus from the above two tables and their outcomes, we can conclude that average farm income over the period 1993-1998 was virtually the same although the median income declined substantially.

Working out changes in farm income using the percentage of farm income relative to total household income 1993 and 1998, however, shows a difference that is regarded statistically significant. As the statistics in the following Table 14 shows, agricultural income has declined in 1998 to 9.9 percent of total household income from a level of 15.4 percent in 1993.

Table 14: Annual Agricultural Household Income Percentage 93 & 98.

% income from agriculture for producing hhs only.

	Aginc 1993	Aginc 1998
Mean	15.4	9.9
Median	8.7	3.4
SE	0.923	0.833

N= 806

However, there are two important facts to be noted here. First, the mean may sometimes not be appropriate technique for measuring the performance of certain activities because it tends to obscure significant individual differences. An analysis of the farm income frequency tables for both years shows that though few, some rural producers (8 households for 1993 and 11 for 1998) were able to obtain higher farm output (ranging from R900.00 to R3000.00 for 1993) and (from R900 to R9000 for 1998). This usually results from either an increase in farmland size and this is unlikely in the case of KwaZulu-Natal because of the defective land tenure system and lack of land market, or mainly as an outcome of higher productivity or investment. This is possibly the right explanation as the literature in this regard points to the close association between better-off households and higher farm income (May, 2000). These variations are important since they suggest a possibility for raising farm income. This fact should prompt researchers to investigate why or how these particular households are extracting more money from farming and based on that draw policy implications. This conforms to the principles of the Sustainable Livelihood approach to rural poverty reduction, which stresses the importance of assessing strengths and similar achievements rather than simply highlighting weaknesses and constraints.

The second is that a closer examination of agriculture decomposed into its constituent components, namely, arable agriculture and livestock production brings out very important facts that suggest a qualification of this statement. Elements making up arable production have on average recorded an increase in different proportions whereas production in the area of livestock experienced a decline. Statistical results below -for the total sample of rural households (806) surveyed in both years- show that the percentage of households involved in crops field rose from 30.3 percent in 1993 to 42.6 percent in 1998, in contrast to those owning livestock which decreased to 31 percent from 32 percent in 1993.

Remarkable, however, is the substantial increase in the number of households involved in gardening, (table 15 below), which jumped from a level of 19.7 percent in 1993 to 35.1 percent in 1998, an increase of almost 80 per cent. This area of production appears to be gaining significance all over the country. This may indicate a gradual shift in cropping pattern from field crops to gardening. This has been observed elsewhere. In the Transkei, people started to abandon cultivation of their fields and investing their agricultural efforts in the home plot (McAllister, 2000 cited Shackleton, 2001).

Table 15: % of households owning livestock, crops fields and gardens (1993 and 1998)

	Livestock		Fields		Gardens	
	1993	1998	1993	1998	1993	1998
No	68.0	69.2	69.7	57.4	80.3	64.9
Yes	32.0	30.8	30.3	42.6	19.7	35.1

Agricultural investment, on the other hand, seems to have increased over the period. As Table 16 below exhibits, the percentage of households owning agricultural equipment in 1998 rose to 51 percent from a level of 41 percent in 1993. Likewise, real value of equipment in 1993 prices grew from R402.66 in 1993 to R423.87 in 1998.

Table 16: % of households owning agricultural equipment and value of equipment (1993 and 1998)

	Own agri equipment		Value of equipment	
	1993	1998	1993	1998
% or Mean	41.0	51.0	R402.66	R423.87
Median	-	-	R100.55	R164.99
N	806	806	342	544

While the percentage that own livestock out of sampled households slightly declined as indicated above, agricultural production in the area of livestock, however, showed insignificant rise from 1.8 in 1993 to 2.02 in 1998. In general, livestock production could be said to have been poor in 1998. Analysis of some factors with close relevance may provide an explanation for negative or poor

performance of the livestock sub-sector. The percentage of households having access to private and communal grazing land significantly went down from 5 and 38.3 percent in 1993 to 2.4 and 26 percent in 1998 respectively.

Table 17: Average of households owning livestock and having access to private and communal grazing land

	Mature livestock units in 1993	Mature livestock units in 1998	Private grazing land in 1993	Private grazing land in 1998	Communal grazing land in 1993	Communal grazing land in 1998
Have Access	32.0	30.8	5.0	2.4	38.3	25.9
Mean MLU	1.75	2.02	-	-	-	-
Owned						
SE Mean	0.139	0.198	-	-	-	-

The above trends of changes in agriculture during the designated period bear important implications with regard to future possible and potential rural livelihoods generation from this sector. First, there is clearly an expansion of agricultural activities, especially in arable farming, as more land is coming under cultivation. This could either be a result of expansion of existing farms or possibly new rural households taking up farming as a means of earning a living. Secondly, the large increase in the number of garden crops signals a trend towards a livelihood strategy that accords priority to community gardens and smallholder production relative to field crops or other form of production. This shows the importance of agriculture for livelihood security. In the South Africa-Participatory Poverty Assessment, May (1998) notes that gardening is undertaken as a hedge against the lean season and serves a critical supportive function at particular times of the year.

Finally, the arable component of agriculture is the basic and more strategically important one and as such progress made in this area represents a healthy indicator of future prospects and possibilities for further improvement. Besides, the fact that the majority of rural households engage in some form of arable agriculture (Shackleton et al., 2000) means that this progress is shared widely. In contrast, only a minority of households (15-30 percent) own cattle (Hatch, 1996), which helps limiting the effects of poor growth in this area.

Based on the above, it can safely be said that future annual cash flows from arable agriculture for rural households are likely to experience a gradual incremental upward movement and boosts in a manner proportional to the stock of capital resources investments or, at worst, maintain the present level unless disrupted by periodic sharp rainfall fluctuations or other natural hazards.

5.5 Comparing changes in agriculture performance relative to other means of livelihoods

5.5.1 Changes in employment

International literature on agriculture in rural areas supports the data that there has been an increase in the number of households engaging in farming. According to Bryceson and Jamal cited in Biggs and Ellis (2001), there is evidence that livelihood strategies based on part-time farming supplemented by other activities are gathering momentum. One of the reasons for this is the practice prevalent especially in areas of high agricultural potential of sub-division of land upon inheritance resulting in declining farm size. Statistics in this regard show that 67 per cent of workers in China, 59 per cent in South Asia, and 60 per cent in sub-Saharan Africa report agriculture as their main income source, and for the poor proportions are even higher (Lipton, 2004). This implies that the poor performance of agriculture in most of the less developed countries (LDCs) manifested in its low share of the gross product (GDP) does not detract from its importance as the largest employer compared to other sectors.

In South Africa, despite its relatively small contribution to household income compared to pensions and wage labor in the secondary market, agriculture seems to be an indispensable activity of the portfolio of rural households' activities as over one third of them practiced it, 36.4 percent, compared to 32.4 percent of households receiving pensions and 37.4 percent engaged in wage labor (Carter & May, 1999).

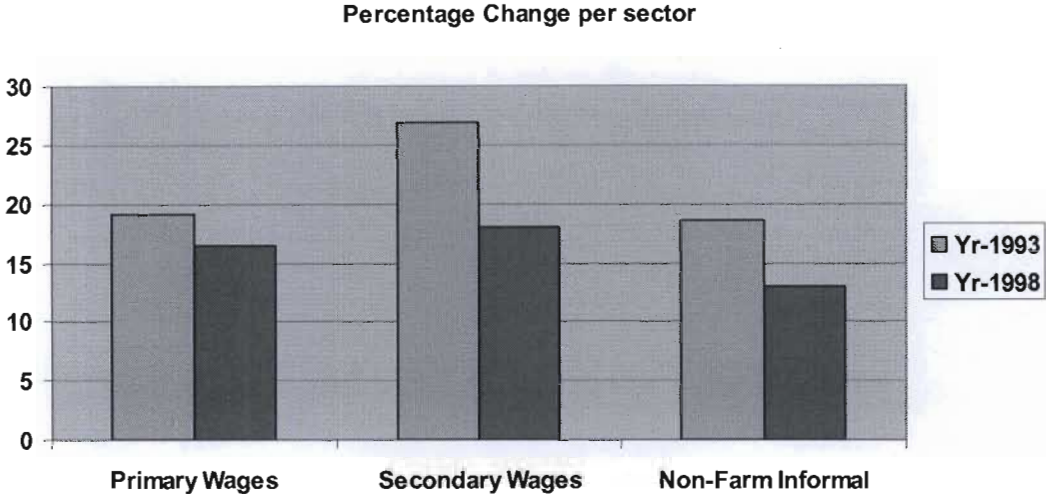
The duality in the structure of the economy, agriculture versus industry and spatially of rural versus urban areas manifests itself in the form or configuration of the country's labor market. It is thus conceptualized as a segmented market comprising of two main sectors- a primary and secondary market (May, 1996).

The next table shows the percentage of households who were involved in primary or secondary wage employment as well as in non-farm informal sector self-employment.

Table 18: Percentage of households per sector

	Primary Wages		Secondary wages		Non-farm informal sector	
	1993	1998	1993	1998	1993	1998
No	80.9	83.6	73.0	82.0	81.4	87.0
Yes	19.1	16.4	27.0	18.0	18.6	13.0

Figure 3: % change per sector (1993 and 1998)



Overall results show a substantial decline particularly for secondary wages. Of interest, particularly, is the downturn trend in the percentage of primary laborers. The number of households sourcing livelihoods from this sector went declined to 316.4 in 1998 from 19.1 percent in 1993. This is consistent with the literature on primary labor market in South Africa which claims a decline in this sector caused by retrenchments and job losses over the last few years (Schirmer, 1999). To conclude, changes in composition of livelihoods in the labor market reveal a general decline for all sectors. This may suggest changes in the structure of labor markets that disfavors rural migrants.

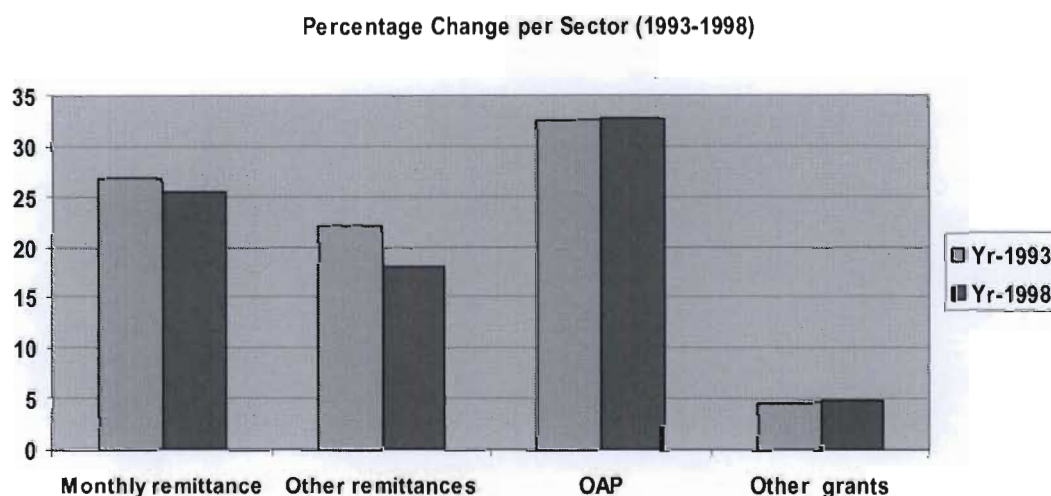
The next table shows the percentage of households that earned income from remittances, pensions and other welfare grants. Remittances refer to money sent to the rural household from someone

living elsewhere, most likely a migrant household member. The source of the remittance is not known and may be from wage employment or non-farm informal activities.

Table 19: % of household per source of livelihood (1993 and 1998)

	Monthly remittance		Other remittances		OAP (old age pensions)		Other grants	
	1993	1998	1993	1998	1993	1998	1993	1998
No	73.2	74.6	77.9	81.9	67.5	67.2	95.3	95.2
Yes	26.8	25.4	22.1	18.1	32.5	32.8	4.6	4.8

Figure 4: % change per sector (1993 and 1998)



The data show a declining trend in the percentage of households sourcing livelihood from monthly remittance and particularly other remittances while other sources have managed to maintain the same percentage of households over the period 1993-1998. The percentage of producing households, on the other hand, as stated earlier, increased from 49 percent in 1993 to 65.3 percent in 1998.

Thus it can be concluded that self-employment in agriculture constitutes the largest attempted and most stable activity and is likely to witness a steady increase in view of the decline in all other means and activities of livelihood. This is consistent with findings of previous studies outlined

above. This may suggest the availability of agricultural resources and the high employment opportunities in the sector relative to others.

Of relevance to the previous discussion is the notion of 'primacy', that is, the debate on what constitutes the primary source of livelihood for rural people. It is a critical issue because of its policy implications. Ideally, this should be determined on the basis of how rural people themselves perceive their various livelihoods and see their relative importance. This is reflected in their behavior, attitudes and actions. A good example is the rationale applied in the process of constructing a livelihood strategy. In a study in South Africa (Shackleton et al., 1995) cited in (Shackleton et al., 2000), observes that a local community group suggested diversifying income from other sources in addition to farming as indicators of a 'secure' household. This indicates that the non-farming activities are undertaken to supplement the farm income for achieving secure livelihood. More recently, it is observed that "...in Shixini (despite reliance on income from employment, remittances and pensions) people saw themselves primarily as agriculturalists, and external income was viewed as a means to build the rural homestead including raising livestock and cultivating the soil." (McAllister, 1998) cited in (Shackleton et al., 2000).

In addition, among the motives underpinning the practice of multiple-activity livelihood strategy is to meet the need for farming working capital through cash earnings from non-agricultural activities with the objective of enhancing productivity for sufficient cash generation to meet household and other financial obligations (Berry, 1989a) cited in (Hussein and Nelson, 1998). Suggestive evidence indicates the tendency of those better-off who have cash earnings from non-farm sources to use their cash income for capital investment into diverse activities including herd building, arable agriculture and starting up small businesses (Shackleton et al., 1995 cited in Shackleton et al., 2000). All this suggests that for many households, agriculture is a constant primary component in the package of activities that make up the livelihood strategy. Furthermore, agriculture forms a basis for livelihood security and the focus of household's 'investment area'. Other sources play a supportive role towards these ends, no matter how much cash they generate.

The empirical data already presented shows that farming constitutes the economic activity attempted by the largest number of households. In other words, farming has the highest incidence (55 percent)

followed by remittances (26) percent). This is surprising in view of the great difference in the cash flow from these activities. This consistency and convergence of theory and empirical data leaves little room for disputing the 'primacy' of agriculture.

The above evidence can help answer the question about the nature of livelihood diversification, whether agriculture is a coping or adaptive strategy or put otherwise, is induced by 'push' or 'pull' factors. The literature on this suggests that it is a coping strategy induced by pushing factors manifested in the lack of sufficient income from farming and the need to secure a livelihood. Empirical evidence in KwaZulu-Natal (above) shows a much lower farm income as well as higher poverty incidence in 1998. Thus it could be deduced that the nature of diversification is of a coping nature. Poor performance of the agriculture sector, on the other hand, precludes any possibility of agriculture-stimulated and related non-farm sector activities such as construction, service and trade enterprises. There could, of course, be some instances of some households investing capital earned from productive farming into such businesses but there are two issues here. First, the dataset does not provide for the necessary data, for example, the type of the non-farm business and the source of the start-up capital. The other problem is that performance of this sub-sector is best measured and assessed in aggregate for the whole local economy for both years 1993 and 1998 rather than individual households. The dataset does not cater for this as well.

The above results could also be used to underline the importance of agriculture for rural livelihoods from a different perspective. Recent innovations in the area of poverty reduction like the Sustainable Livelihood (SL) approach highlight a number of principles and features that should be integral to any intervention. The main ones of these are:

- That it should be endogenous or localized, in this case, for the rural areas of KwaZulu-Natal. The inability of urban-based development to absorb the steadily increasing large numbers of rural migrants prompted an attitude that recognizes that poverty must be tackled where it originates or occurs (DFID, 2003). Failure or inadequacy of national efforts to create livelihoods-earning opportunities for the poor rural masses in sub-Saharan Africa prompted the emergence of voices calling for 'localizing' livelihoods generation. For instance, Kydd et al. (2004: 537) argue that "...the combination of high national unemployment and a dearth of locally generated livelihoods make support for the generation of more livelihoods locally critically important." IFAD (2001) supports this notion and argues that poverty-alleviation

measures should emphasize and be based on agriculture since it is the predominant economic activity in the region (sub-Saharan Africa) and goes further to qualify this by stressing that these measures must reflect the agricultural activities in which the poor are actually engaged (smallholdings). The report recognizes the complexity and multi-sectorality of rural life and livelihoods but notes that for the foreseeable future agriculture will remain the principal (but not exclusive) economic activity (IFAD, 2001: 11). This implies that the situation in rural areas and the scope of challenges at present is such that agriculture's role and contribution is very critical.

- That it should be limited in scope so as not to fall in the traps of the Integrated Rural Development (IRD) strategy which involved a wide range of projects in various areas (Krantz, 2001). This entails choosing some core building blocks like agricultural production or non-farm sector activities.
- That it should employ the assets and capabilities of the rural poor and increase its productivity. This means using the labor and land resources of the poor productively.
- And last that it should be holistic in its view.

Contemplation of these principles provides important insights that suggest a greater role for agriculture than other activities particularly in the context of KwaZulu-Natal. This is so by virtue of its features as well as due to some facts on the ground in the context at stake- KwaZulu-Natal. Agriculture is valued for:

- Being the largest employer as indicated above (in terms of farm self-employment and wage labor).
- Being an endogenous activity undertaken and run locally, undertaken as self-employment and thereby relatively controlled by the rural people themselves unlike wage labor.
- It provides an opportunity for the rural household to maximize the use of its available assets, particularly labor, for greater output.
- It helps securing household food security in times of fluctuating staple food prices, job insecurity and increasing unemployment.

- Most important, agricultural production fits the assets and skills profile of rural people, particularly their human capital profile
- Agricultural production makes use of the ample natural resources in KwaZulu-Natal and provides possibilities for higher livelihoods generation as producers move up a value chain.
- And its role and importance for initiating and laying the basis for the development of agrarian economy via its intersectoral linkages.

No activity, whether wage labor or remittances, can provide this range of potential and actual benefits. Wage work in secondary labor market, as pointed out earlier, is mainly agricultural operations on large commercial farms in rural and peri-urban areas (Sender, 2002). These are low-paid jobs and with globalization, lack of state support and the need for higher productivity or lower costs for competitiveness, it is likely that wage rates in this sub-sector will decrease over time. Moreover, with the possible increase in the stream of people seeking wage employment in proportion to the amount shed off by the primary labor market, wage rates would probably go down further.

Remittances on the other hand, are sourced mainly from relatives in urban areas and migrant workers in the primary labor market. Livelihoods from this component, as test results indicate above, are both insecure and shrinking. This may probably continue under the present national economic development strategy and globalization. Growth in the economy is likely to involve the substitution of poorly skilled with few highly skilled jobs that disadvantage migrants from rural areas (Taylor and Cairns, 2001). Migrant labor and remittances, in contrast to farming, are not part of the web of activities carried out in rural areas and are not considered as sources of growth in rural areas (Kydd et al., 2004). The shortfall in employment and livelihoods resulting from unfavourable changes in these sources would have, in the short run, to be filled or made up for in the agricultural sector.

Non-farm self-employment such as micro-enterprises does not hold much promise or prospects under conditions of high poverty incidence and very low levels of agricultural productivity and incomes. Datt and Ravallion (1996) cited in (Kydd et al., 2004) cite evidence stressing the importance of drawing on local activities and resources especially those that generate growth for the

agrarian economy. The study showed that rural poverty measures respond more to rural economic growth than to urban and thus concluded that a focus on rural economies, as opposed to urban, is also crucial for poverty reduction. Most importantly it suggested in line with the linkage literature, that “the non-farm component of the agrarian economy is most dynamic and productive when farming is thriving” (Kydd et al., 2004: 47). The expansion in agriculture, noted in Table 9 above, may signal the early signs of a trend exhibiting a shift in livelihoods from urban wage labor to farming and rural agricultural wage labor.

The next section, however, looks specifically at the livelihoods contribution of agriculture as a measure of its importance for reducing rural poverty. This is estimated in actual cash flows rural households earn from the sector.

4.2 Changes in measured income flow

As already mentioned, total rural household income in KwaZulu-Natal increased twofold from an average of R870.30 in 1993 to R1442.11 per household in 1998 in constant 1993 prices. Normally this would translate into better or improved living conditions and could even lift some portion out of poverty because of close association between the two variables. But statistics show that poverty incidence has widened over the period from an average level of 0.34 in 1993 to 0.59 in 1998, that is, over half of rural households entered into poverty by 1998.

The next table displays the relative income contribution of each of the components that make up the household livelihood strategy.

Table 20: Relative cash income flow from the different means of livelihood for (1993 and 1998)

	Agriculture income %		Wage labor income %		Remittances %		Pension %	
	1993	1998	1993	1998	1993	1998	1993	1998
N	394	436	578	555	671	590	666	578
Missing	412	370	228	251	135	216	140	228
% with income source	22.87	16.70	13.62	19.72	19.40	17.37	14.27	26.17

The data show divergent trends of change for the various variables in the period 1993-1998. An outstanding result, of all, is the tremendous increase in the amount of cash transferred to rural

households in the form of pensions from 14 percent in 1993 to 26 percent in 1998 out of the total cash earnings. Agriculture, in contrast, is the only one to record a relative high decline that removed it from the top in 1993 with 23 percent down to the bottom of the ladder in 1998 with earnings that account for 17 percent. It is interesting to note, on the other hand, the significant increase in income generated from wage labor which pushed it up to 20 percent in 1998 from 14 percent in 1993 while remittances, in contrast, shows a slight trend of decline as it decreased to 17 percent from 19 percent in 1993. The difference is found to be statistically significant for both years at a level of (0.95).

It can thus be concluded from the above table that pensions have become the main source of livelihood for rural households in 1998. Considering the fact that these households have aged five years between the surveys, they will increasingly be eligible for pensions. It is not surprising, therefore, that pensions will steadily increase as the dominant source of income. Wage labor comes next to pensions although at much lower proportion while agriculture has retreated to the back benches. This suggests poor performance of agricultural production in terms of measured livelihoods. It is consistent with previous studies that arrived at similar conclusions concerning the magnitude of earnings from these sources. May and Carter, (1999) findings reveal that farming with a mean of (R91), occupies the third place after pensions (R396) and wage labor in the secondary market (R582) in 1994 prices. Sender, (2002) in his study of rural poverty underlines the importance of wages as a source of income for the poorest quintile of African rural household and notes that no other source of income recorded in the PSLSD survey, whether from self-employment, agricultural production or state transfers made nearly an equal contribution. As he notes "...the mean contribution of wages and remitted wages to the household income of the poorest quintile of households was relatively high, amounting to 68% of total income compared to the mean of all African rural households (59%).” (Sender, 2002)

However, some remarks are in order. An accurate and precise calculation of farm income is likely to be difficult and as such more likely to be under or overestimated. There is also the problem of demarcation and distinction of rural areas from peri-urban, and small towns (Ardington and Lund, 1996). Another point is the tendency of some studies/surveys to underestimate the potential of agriculture due to inappropriate measuring methods (May, 1996). All this suggests that agricultural yields may be more than usually estimated (Cross et al., 1996). The huge decline in the relative percentage contribution of agricultural income to farming households reported above from 7 percent

in 1993 to 1 percent in 1998 despite progress made in arable agriculture in 1998 reinforces these claims and questions the validity of the methods applied to capture and quantify cash flows from farming.

Treatment or consideration of agriculture on equal terms with wage labor, non-farm self-employment and remittances and comparison of its contribution with that of these sources seems to be an inappropriate method in principle and disadvantageous to agriculture. This is so because of fundamental dissimilarities in the nature of these sources. For instance, agriculture is almost the only economic activity that involves a real production process that demands more than a single resource input. To yield greater output, we need a range of physical, financial and human capital resources and investments while it almost takes only labor to earn a living from the other sources and possibly some start-up capital in the case of micro-enterprises. Lack of or inability to afford this would definitely translate into poor farm harvest and cash flows. May, (1996) reports that 85 percent of those with land had not used it fully and that all those who used their land intensively and who generated the highest incomes from agriculture are those who were able to earn additional wage incomes in non-agricultural activities. Thus the importance of agriculture for enhancing rural livelihoods and reducing poverty should be assessed apart from other sources due to the special nature of the sector.

Moreover, in the KwaZulu-Natal context, this approach greatly disfavors agriculture and underestimates its role. It is inappropriate to compare performance of players in an 'unlevelled playing field'. Rural areas, agricultural markets and land in South Africa were the regions and issues most affected by past policy distortions and neglect and remain the victim of present neglect. The initial poor performance and low cash flows resulting from such a situation usually tends to set in motion a process of vicious circle that traps the sector into constant decline. For instance, although the process of livelihood strategy construction recognizes the importance of farming, it assigns quality labor to non-farming livelihoods (wage work) under desperation for additional cash flows to secure a livelihood (diversification under distress or out of desperation). This is rational and sound economic decision because that labor allocated to farming would generate much lower than in wage work simply because the production process in agriculture involves more than labor to yield high return, a fact that has to do with the nature of the activity. However, a disadvantage is that this keeps the farm income ever low starting thereby the vicious circle of no or poor investment, such as access

to financial capital, information and poor skills in particular. This leads to poor farm output and returns, inducing a decision to shift and allocate labor away from farming into non-farming again leading to poor farm output and so forth. The only possibility to break this is either through injection of public funds and resources into the sector or rural producers generating non-farm cash income sufficient enough to meet subsistence needs and make some savings to invest in agriculture to raise productivity.

In view of these challenges, the exceptional production conditions in this sector and the incapacity of rural producers due to their high poverty to make changes in short time despite large potential opportunities is understandable. Whatever measure of productivity and output is achieved from contemporary farming; it represents a 'significant' contribution especially for being the critically important portion for household livelihood security including the production of staple food- safety net.

5. 6 Characteristics of farming households

Besides measured income, it is also a good idea to identify what types of households are likely to achieve high or low income from agriculture. This is important because it provides meaningful insights relating to sectoral inter-relationships, which could be used for influencing agricultural production. The next section deals with characteristics of farming households, both poor and not poor, using the crosstabs technique. The next table exhibits the agricultural income-groups in 1998 for the sample that were categorized as poor and not poor in 1993 and 1998. These groups have developed from dividing the income frequencies of total sample of households into quintiles.

Of the total sample, the number of poor households that did not produce has decreased in 1998 to 24 percent from an amount of 28 percent in 1993. The percentage distribution of households across the various agricultural income groups generally shows a relative concentration of both poor and not poor households on the first two income groups making large negative earnings⁴ from agriculture for both years 1993 and 1998. Results show an increase in the percentage of poor households earning (More than -R60) and particularly (-R5 to -R59) in 1998.

⁴/ Negative incomes mean that these households spent more on agriculture than they earned.

Table 21: Agricultural income groups and Poverty incidence (93 & 98)

% within 93 & 98: Poverty

		P o v e r t y			
		Poor 1993	Poor 1998	Not poor 1993	Not poor 1998
Different ag	More than -R60	16.10%	17.20%	21.70%	23.10%
Income	-R5 to -R59.90	19.0%	22.80%	20.60%	16.90%
Groups	R0 to -R4.90	4.30%	5.60%	4.80%	3.60%
	R1 to R17.90	11.80%	14.40%	13.60%	11.40%
	R17.90 to R79.90	10.40%	8.90%	9.40%	10.70%
	More than R80	10.40%	7.20%	10.10%	13.60%
	Did not produce	28.00%	23.90%	19.90%	20.80%
Total		100.00%	100.00%	100.00%	100.00%

This holds true for the not poor as well. The number of poor households in the last two groups with high positive agriculture income (R17.90 to R79.90) and (more than R80) in contrast has shown a decline while it significantly increased for the not poor. An interesting outcome, however, is the significant increase in the already relatively high percentage of poor households in the middle-income group (R1 to R17.90) from 12 percent in 1993 to 14.4 percent in 1998. It is also interesting to note that the percentage of not-poor households in this income group has significantly declined from 14 percent in 1993 to 11.4 percent in 1998. The difference for all these changes is found to be statistically significant at a level of (0.95) for both years.

It can thus be concluded from this table that an increasing proportion of producing poor and not poor households have recorded losses in agriculture in both 1993 and 1998. This might be measurement error whereby the costs of agriculture were more accurately gathered than the incomes. However, for the not poor, this is offset by an equal increase in the percentage of households in the last two high-income groups in 1998 and for the poor by a similar increase among the middle-income group in 1998. These findings may suggest the risky nature of agriculture and thus insecure livelihood. The results also imply the potential and possibility of higher earnings under appropriate production conditions and with more investment and likewise poor returns for poor or lack of investment.

The table below shows the agricultural transitions of the sample and the incidence of secondary wage labor in each of these groups in 1993 and 1998.

Table 22: Agricultural Transitions and Secondary Wage Labor (1993 and 1998)
% within agriculture activity 93-98.

Agricultural Transitions 1993-998	HHs with secondary wage earners 1993	HHs with secondary wage earners 1998
Neither year	41.30%	40.70%
Exited agriculture	19.50%	15.90%
Entered agriculture	31.40%	23.10%
Both years	13.90%	12.00%
Total	25.10%	21.70%

N=806

Test results generally exhibits a similar small change in the percentage of producing households with secondary wage earners almost across all agricultural transitions categories over the period 1993-1998. An interesting result, nonetheless, is the contrasting trends in those entered and exited agriculture. From 20 percent in 1993, the percentage of producing households with secondary wage earners that 'Exited' agriculture interestingly went down to 16 percent in 1998. This positive outcome is somewhat offset by the decline in the percentage of those 'Entered' agriculture from 31.4 percent in 1993 to 23.10 percent in 1998. The difference is found to be statistically significant at a level of (0.95) for both years.

It can thus be concluded that the majority of producing households with secondary wage earners tend to stay in agriculture. This reluctance among some of these households to enter agriculture may suggest the disincentives of poor cash flow from this activity and high opportunity cost of family labor.

The table below displays the agricultural transitions of the sample and the incidence of regular remittances in each of these groups in 1993 and 1998.

Table 23: Agricultural Transitions and Regular Remittance (1993 and 1998)

% within agriculture activity 93-98.

Agricultural Transitions 1993-998	HHs with regular remittance earners 1993	HHs with regular remittance earners 1998
Neither year	14.70%	19.30%
Exited agriculture	28.00%	29.30%
Entered agriculture	22.50%	24.90%
Both years	38.20%	41.20%
Total	27.70%	30.70%

N=806

Overall, the table exhibits a small positive increase in the percentages of producing households with regular remitters across all the agricultural transitions groups over the period 1993-1998. The percentage of those 'Entered' agriculture moved up to 25 in 1998 from 23 percent in 1993 and those 'Exited' the sector witnessed a slight or insignificant increase from 28 percent in 1993 to 29.30 percent in 1998. The only exception is the slight increase in those households with regular remitters farming 'Neither' year in 1998 to 19.30 percent. The difference is found to be statistically significant at a level of (0.95) for both years.

It can thus be concluded that while percentages of households with regular remitters experienced almost an equal positive increase in 1998, this was relatively slightly higher for those farmed 'Neither' year in 1998. This suggests that producing households with regular remitters maintain agriculture. Findings may further suggest a slight tendency of reluctance among households with regular remitters to enter agriculture in the long term.

The next table shows the agricultural transitions of the sample and the incidence of primary labor in each of these groups in 1993 and 1998.

Table 24: Agricultural Transitions and Primary Labor (1993 and 1998)

% within agriculture activity 93-98.

Agricultural Transitions 1993-998	HHs with primary wage earners 1993	HHs with primary wage earners 1998
Neither year	26.70%	24.70%
Exited agriculture	19.50%	18.30%
Entered agriculture	23.10%	23.70%
Both years	14.60%	15.00%
Total	20.10%	19.80%

Of the total sample, the percentage of households earning primary wage labor had remained the same over the period 1993-1998. The statistics generally show a negligible decline or constancy in percentages over the period for all categories. Nonetheless, there are some differences. A relatively significant result is the decline in the percentage of households with primary wage labor producing 'Neither' year from 27 percent in 1993 to 25 percent in 1998. But the results also show a similar decline in number of households with regular primary earners in the 'Exited' agriculture group. The difference is found to be statistically significant at a level of (0.95) for both years.

Based on the above it can be concluded that producing households with primary wage earners tend to maintain their agricultural production, although those who were not already producing show a reluctance to start up farming. This could possibly be explained by the low and unstable returns from the sector or other structural problems such as the availability of land.

The following table exhibits agricultural activity transitions and number of households without primary, secondary wage laborers and remittances over the period in 1993 and 1998.

Table 25: Agricultural transitions and primary, secondary and remittances (1993 and 1998)

% within agriculture activity 93-98.

		No primary, secondary, and remittances	
		1993	1998
Agriculture	Neither year	29.3%	28.0%
Activity	Exited	45.1%	45.1%
93-98	Entered	33.0%	39.1%
	Both years	42%	39.0%
Total		37.0%	37.1%

The table shows no significant changes for in the percentage of households in the different agricultural transition groups who did not have access to income from primary, secondary and remittances. The exceptions are those in the category activity of ‘Entered agriculture’. The percentage of households who entered agriculture that had no income from primary or secondary earners or from remittances rose significantly to 39 percent in 1998 from a level of 33.1 percent in 1993.

Thus it can be concluded from the table that households without primary, secondary wage earners and remittances tend to enter the agriculture sector and start up farming. This suggests that household decision to enter the agriculture sector is an independent decision based on recognition of the importance of livelihoods generated from the sector for satisfying certain needs and that it is not influenced by engagement or earnings from other sources such as primary or secondary wage labor or remittances. In other words, people are attracted to agriculture out of desire to obtain potential earnings despite a good measure of risk and high investment costs or else, low returns under poor investment and regardless of cash flows from other sources of income. This lends substance to arguments made above about the importance and ‘primacy’ of agriculture on its own merit and that cash or resources earned from these sources (wage labor, remittances...) are important only for supplementing agricultural income to secure a sufficient livelihood for the household as well as for investing the balance on farming, if any.

5.7 Conclusion

To sum up, results in this section indicate that the percentage of poor households tend to increase in the middle agricultural income group while the not-poor concentrate in the higher ones. The fact that a good proportion of not-poor households tend to make substantial gains or losses from agriculture gives a sense of the risky but potentially rewarding nature of this activity. Evidence of increase in the scope of gardening noted earlier may possibly be a good indicator of this.

The composition of the different agricultural income groups in terms of expenditure quintiles does not provide useful insights regarding association between the two variables. A number of producing households with high expenditure are losing while others are making a good business in agriculture. This again confirms the risky nature of the sector but suggests that a reasonable return is possible provided that other income sources enable producers to make savings for investment in agriculture.

The majority of producing households with secondary wage earners tend to make modest earnings in agriculture while those without experience big losses. This may suggest the advantage of households with secondary wage earners to employ this labor occasionally in the family farm. The outcomes in terms of changes in agriculture activity indicate that households with secondary wage earners tend to maintain farming.

There is a trend of a significant positive shift among households with regular remitters from negative agriculture earning groups to those with high earnings. Thus it could be concluded that households with regular remitters are very likely to earn higher incomes from agriculture. With regard to changes in agriculture activity over the period 1993-1998, statistics show a slight change in the percentage of households with regular remitters entering agriculture.

There is a tendency among households with primary wage earners to stay in agriculture as well as a slightly declining trend in the number of those entering the sector over the period.

In conclusion, although cash flows from the above sources may assist with boosting agricultural productivity for producing households and thereby earning relatively high yields from farming, this however, did not seem to influence household decisions to enter exit or remain in agriculture.

CHAPTER SIX: CONCLUSION AND POLICY RECCOMENDATIONS

6.1 Introduction

This chapter concludes this dissertation by summarising the main findings of the study and presenting the policy implications and recommendations. It is made up of three parts. It starts with re-examining the research hypotheses and the investigation design. The second part presents a summary of the study findings. In this it follows the structure of the analysis which is organised around three thematic areas measuring the contribution of farming in absolute and relative terms as well as a section on the characteristics of farming households. The chapter finishes with policy implications and recommendations.

This study has used panel data collected in two waves in 1993 and 1998 known as the KwaZulu-Natal Income Dynamics Study (KIDS). The research context is rural KwaZulu-Natal with a sample size of 806 households. It is a quantitative study that involved statistical analysis on secondary data. However, a major disadvantage considered to be a limitation of this methodology for the purposes of the study is the lack of relevant data that reflect some socio-economic benefits of agriculture for rural people. Milk and manure are two physical examples, while enhancing community's social capital through agriculture related interactions is a social example. Furthermore, the imprecise nature of data on the non-farm sector activities is another problem and it is possible that income from agricultural production may have been under-reported. These services and benefits are an integral part of the conceptualisation of the role and significance of the sector for rural livelihoods. This has obviously precluded testing the second hypothesis of the study in a rigorous manner although an attempt was made to point that out drawing upon the results of some tests.

6.2 Increasing Poverty

Poverty and hunger are among the most serious social ills that affect many people in the world today and are increasingly becoming a focus of national and international concern. Statistics shows that 1.2 billion people live on less than one dollar a day and that if this measure is raised to two dollars; the poverty rate would be much higher (DFID, 2003). As indicated earlier, the distribution of poverty over the globe is uneven with developing countries, particularly Asia and Africa, and rural areas within countries having the highest rate of the poor.

Evidence indicates that efforts to halt the advance of poverty have had a mixed record. While Asian countries have achieved some progress, the incidence of poverty showed an increase in sub-Saharan Africa throughout most of the 1990s. For the data used in this dissertation, an increase in the rate of poverty in 1998 compared to 1993 was recorded in KwaZulu-Natal, South Africa. This suggests that current policies and strategies adopted by these countries may have either been misconceived or poorly implemented. Whatsoever the case, there is certainly a need for reviewing them and devising other paths, or different sectors and approaches deemed to be more appropriate and effective.

The conventional approach to the role of agriculture in national economic development was ill conceived on two accounts. It failed to take into account the costs consequent upon neglecting the agriculture sector particularly, the small scale farming, in the form of insufficient supplies of food and raw materials as well as loss of means of livelihood for the rural residents and an underdeveloped agrarian economy. But more important is its failure to perceive the great role agriculture could play in the development of not only the agrarian economy but the overall national economic development through its 'intersectoral linkages' with other sectors particularly industry. These are the forward and backward linkages as well as consumption linkages. This dimension, namely, the 'intersectoral linkages' was missed in the calculation of the benefits or role of the sector under the conventional approach.

The assessment of agriculture's contribution to rural areas in particular should include this aspect as well for its importance in the development of the rural non-farm sector. FAO notes "... when considering the impact of agricultural growth on poverty and rural development, its effects through production, income and expenditure linkages on rural non-farm income and employment should also be taken into account" (2001: 20).

It is, however, also important to note that for agricultural growth and development to be pro-poor in rural areas, an appropriate form of agricultural production has to be adopted. The smallholder strategy to agricultural development, according to the literature, is an appropriate form of production through which the sector can have a real and significant impact on the living conditions of rural residents as well as the urban poor. As IFAD report notes that the smallholder approach "...is not the final answer to growth, but it is the basis of livelihoods. The potential for its improvement represents

the most immediate practical opportunity to reduce rural poverty and stimulate broad-based growth processes” (IFAD, 2001: 13).

This does not mean an ‘anti-large-scale farming’ attitude or an ‘anti-industry’ attitude. The wide range of benefits generated by the large-scale farming sector in countries like South Africa is very much appreciated nationally, while expansion in formal non-farm employment is essential both for economic growth and household incomes. It is, however, important to acknowledge that the portion of these benefits that go to rural people in terms of employment and low staple food prices or otherwise is neither certain nor secure, neither is it large enough to significantly reduce poverty. The ‘opportunity cost’ of the land and other resources (public) employed by this sector is quite considerable to rural people. The challenge then is how to strike a balance between the two and develop the smallholder to realise the potential of the sector for addressing rural poverty.

6.3 Findings from KIDS

Study findings from KIDS indicate a substantial increase in the percentage of producing households between 1993 and 1998 with a significant increase in both not-poor and particularly among poor households starting up farming in 1998. A major and interesting implication of this finding is the realisation that agriculture is not the domain of poor people only but rather is practiced by a cross-section of rural households. Outcomes also point to the tendency of large number of producing households to maintain farming over the period 1993-1998. This is so despite the significant decline in the percentage of household’s income derived from farming in 1998.

A careful examination of the distribution of farm incomes, however, reveals that, though few, a number of rural producers (the last top 10 households for 1993 and 1998) were able to derive quite high returns from agriculture ranging from R6823.0 to R9223.00 in 1993 and from R933.33 to R3176.42 for 1998. The average income of these households is R4227.95 for 1993 and R2153.38 for 1998.

Another interesting outcome is that while livestock production made no progress, variables measuring the arable farming component of the sector (average number of field and particularly garden crops) all showed a substantial increase. This actually supports the argument behind the

second research hypothesis that relate to the fundamental difference of the agriculture sector compared to the other means of livelihoods. These findings are important because they show that:

- First, that the expansion in farming activities mentioned above is taking place in the arable component, which forms the ‘basis’ of the activity itself and as such has become strategically more important for household livelihood;
- Secondly, the success of some producers to make a good business in agriculture indicates a possibility and potential for enhancing livelihoods from the sector. This presents a case for research work to focus on investigating the reasons and conditions underlying their success and consider possible measures to replicate that.

A significant outcome also relates to the convergence of evidence reflecting a trend of an increase in the percentage or number of households moving into and seeking livelihoods in farming both province-wide and its rural areas in particular. This again underlines the importance of the sector and signals an important message that advises a focus on farming and enhancing its livelihoods if any development effort aimed at reducing rural poverty is to make a broad-based impact.

Findings relating to the labour market have recorded a declining trend in livelihood opportunities generated by the primary and more so of secondary labour market as well as the non-farm informal sector in 1998. This result has very important policy implications especially that this area, the expansion of labour market under GEAR, represents the ‘flagship’ of government efforts to reduce poverty and improve living standards. As a result, options for expanding employment are narrowed down mainly to agriculture with other sectors being supplementary.

With regard to the characteristics of farming households, findings generally show that a great proportion of households from both types, the poor and not-poor, tend to make either substantial losses or gains. Findings detect a tendency among producing poor households to concentrate on the middle-income groups and the percentage of the not-poor to increase in the higher income groups. Households with secondary wage earners on the other hand, seem to attain modest income in agriculture. Producing households with secondary wage earners also tend to stay in agriculture and does not show a motivation to enter the sector. Cash earned from other sources, primary wage labour or secondary or remittances may help increasing productivity of agriculture but largely does not influence the decision of households to enter or exit farming.

To sum up, the findings from KIDS present somewhat inconclusive evidence with regard to the contribution and importance of agriculture: participation has increased even though the measured income flow has declined. The literature blames declining incomes partially on past state intervention as well as lack of public investment and neglect of the sector. A reversal of this attitude or trend seems likely to have a positive effect on the livelihoods generated from this sector considering the potential of agricultural resources the province enjoys. There is strong evidence, on the other hand, of the sector making significant contribution in other areas. The benefits delivered by agriculture, enumerated above, in terms of self-employment or wage labour are important and should not be underestimated.

In general, both evidence from KwaZulu-Natal and the sustainable livelihoods literature suggests that the agriculture sector is attaining more importance and significance for rural producers. This is not simply based on measured actual production but rather on two considerations: the first is the relative poor or declining performance of other means of livelihood particularly the primary and secondary labour market in terms of absorption capacity or the percentages of households earning livelihood from the sector, as stated earlier. According to the literature, this trend is likely to continue under a globalized world (Taylor and Cairns, 2001). Secondly, though smaller, the relative cash flow from agriculture in 1998 was almost equal to that from remittances and a little lower than wage labour. Considering the ample stock of agricultural and human resources the province is endowed with, prospects are high for improved livelihoods from the sector with more investment.

This calls for realigning priorities and policies in favour of the sector to realise this potential. However, there are some issues to take into account. The role of the smallholder sector is limited and short-term. It is basically needed for being crucial in initiating or triggering the development of the rural non-farm sector. The other benefits it delivers are relatively much less important in the context of KwaZulu-Natal and could be compensated for. The sector then, according to theory, is supposed to give way to a diversified agrarian economy and livelihoods with no or very limited scale of family farming eventually. Hence, the role of the sector should be conceived and designed in this way.

This stresses the importance of the other sectors for their capacity to provide for the needs of people (food, employment and income, etc.) in a sustainable manner but that is, according to theory,

conditional upon growth in the agriculture sector as the initial stage in the development sequence. Agriculture is important at this stage not only for supplying food, small farm income and wage labour as a means of livelihood for reducing rural poverty, but also for initiating the development of the non-farm sector in rural areas and rural small towns as well. In other words, agriculture can potentially play a developmental role, and constitutes the entry point and the basis for poverty reduction and the transformation of the agrarian economy whereby more employment could be generated.

The findings examined in this dissertation provide a platform for making a number of recommendations in relation to enhancing the sector's growth in terms of both productivity and as a livelihood.

- A main finding of the study has been the large shift among rural producers from crops field to irrigated farming or homestead gardening. Findings also suggest the ability of some, particularly, not-poor households to make gains from rain-fed farming with others losing out. A policy implication would thus be the establishment of support services more focussed and oriented to the needs of gardening and on a limited scale to small scale rain-fed production or where felt appropriate and feasible. Examples are rural finance, extension and farming inputs, marketing channels, infrastructure and so forth. Among these, financial constraints are thought to be the primary ones (Nattrass & May cited in Fenwick et al., 1999).
- It is the responsibility and the burden of the public sector or the state to initiate the process of development of markets in rural areas by creating a proper physical and institutional environment. Transport and telecommunications network to facilitate the movement of people and flow of production factors between the 'rural' and 'urban' areas is an example.

Establishment of institutions and provision of support services critical for rejuvenating the agriculture sector and agrarian economy as a whole are part of the public sector's responsibilities at least during the initial stage. The public sector should phase out gradually and only when the market has developed well enough to function properly. This will motivate and induce the entry of the private sector, which would take over the delivery of some of the above services.

This is a very important area as these entities, the market and the private sector, may play a detrimental role later in the transformation of the sector and the agrarian economy. However, many African countries', especially sub-Saharan, performance in this respect, as IFAD report notes, is very poor "... Rural economic systems appear frozen – neither state oriented and serviced, nor organised on the basis of developed and well-functioning private markets for goods and services" (IFAD, 2001: 25).

- Delivering the above requires first, a sound understanding of the wide range of factors - social, political, economic, institutional and environmental- that shape the livelihoods of poor people highly dependent on farming. Secondly, providing these services necessitates a reform in the policy and institutional environment in a way that enables the rural poor to derive improved livelihoods from agriculture. This is, in my view, the real challenge that faces the government. It is however, inevitable if the sector is to work productively and contribute to poverty reduction (IFAD, 2003).

Such a change is costly and likely to involve trade-offs and hard choices particularly under limited resources (financial and human). But, as Kydd et al. argue, is worth it in view of the social and economic costs consequent or incurred upon failure to do so "in considering the costs and benefits of investment in agricultural growth, however, regard must also be given to the economic and social costs of rural stagnation and to providing safety nets in situations of enduring poverty" (Kydd et al., 2004: 37).

- The main 'input' in the production process is the human element. Hunger, disease and ignorance convert the poor into 'unfunctional' persons or reduce their productivity condemning them thereby to permanent poverty. Such insights underpinned the innovation of the concept 'human capital' as an alternative approach to measuring poverty replacing the 'money-metric' technique. Delivery of education and health services for free or at nominal charges helps build up the functionings and capabilities of the rural poor and thus improve their productivity. (IFAD-Rural Poverty Report, 2001).
- Reducing the risks associated with agriculture production is another important strategy. This involves a range of measures an important one of which is the reorientation of the agriculture extension service in favour of the needs of rural or small-scale agriculture.

- And last, at a macro level, there should be a change of attitude towards the small scale agricultural sector. This should seek to mainstream it into the national development strategy and planning process and eliminate the view of duality between rural versus urban and agriculture versus industry dominant or prevalent now and instead stress notions of integration and interdependence. Tosterud (1996) notes that "...the economic division and separation of rural and urban South Africa represents the new Apartheid of South Africa" (Tosterud, 1996: 39).

Recognising the importance of integration and 'totality', (Khan, 2001) argues that the improvement of the living conditions or welfare of the rural poor cannot be pursued in a separate fashion from the development of the non-agricultural sectors and urban areas. Instead, he argues that "...a coordinated development of the entire economy is a pre-condition for the development of the agrarian economy and the elimination of poverty" (Khan, 2001: 19). This definitely contrasts sharply with the views holding that South Africa's future is metropolitan and industrial and thus resources should be diverted and concentrated in industrial enterprises based in urban centres.

It is obvious that this long list of 'demands' will require a substantial amount of resources usually beyond the humble budgets of developing countries. Considering the close and strong interrelationships between these areas, a change in one element is likely to cause subsequent changes in others and this may reduce the cost. It is also appropriate to make the process gradual starting with core or strategic areas that have the potential to produce synergetic effect or greater impact. The exercise of quantifying the relative importance of constraints, according to Alwang et al. (1996), helps planning and prioritising investments that are perceived to have greater impact in terms of facilitating the development of small-scale farming.

References

- Aliber, M. (2003). 'Chronic Poverty in South Africa: Incidence, Causes and Policies.' *World Development*, 31(3), 473-488. ✓
- Andhra Pradesh Rural Livelihoods Project. "n.d.". *What is APRLP's Livelihoods Approach?*.
<http://www.aprllivelihoods.org/APRLPlivelihoodapproach.html> Downloaded 23 December 2004
- Ardington, E. and Lund, F. (1996). 'Questioning Rural Livelihoods' in Lipton, M (ed.) *Land, Labour and Livelihoods in Rural South Africa, Volume Two: Kwa-Zulu Natal and Northern Province*. Durban: Indicator Press. 31-57.
- Ashley, C. and Maxwell, S. (2001). 'Rethinking Rural Development.' *Development Policy Review*. 19(4), 473-490.
- Auty, M.R. (1995). *Patterns of Development: Resources, Policy and Economic Growth*. London: Edward Arnold.
- Barghouti, S., Timmer, C. and Siegel, P. (1990). 'Rural Diversification: Lessons from East Asia.' *World Bank Technical Paper*. 117.
- Barrett, B., Reardon, T., Webb, P. (2001). 'Non-farm income diversification and household livelihood strategies in rural Africa: concepts, dynamics, and policy implications.' *Food Policy*. (26), 315-331.
- Binswanger, H. (1996). 'Patterns of Rural Development: Painful Lessons' in Zyl, V.J (ed.) *Agricultural Land Reform in South Africa: Policies, Markets and Mechanisms*. Cape Town: Oxford University press. 18-35
- Block, S. and Webb, P. (2001). 'The Dynamics of Livelihood Diversification in Post-Famine Ethiopia.' *Food Policy*. (26), 333-350.

Bryceson, D. (1996). 'De-agrarianisation and rural employment in sub-Saharan Africa: A sectoral perspective.' *World Development*. 24(1), 97-111. ✓

Bryceson, D. (2000). *Rural Africa at the Crossroads: Livelihood Practices and Policies*. London: Overseas Development Institute
<http://www.odi.org.uk/nrp/52.html> Downloaded 22 December 2003.

Byres, T.J. (1982). 'Agrarian transition and the agrarian question', in *Rural Development: Theories of Peasant Economy and Agrarian Change*. London. Hutchinson University Library.

Carter, M.R. and May, J. (1999). *One kind of freedom: poverty dynamics in post-apartheid South Africa*. <http://www.wishttp://www.wisc.edu/lrc/live/bassaf9912a.pdf>, Downloaded 20 January 2004

Carter, M.R. and May, J. (1999). 'Poverty, livelihood and class in rural South Africa.' *World Development*. 27(1) 1-20.

Chambers, R. (1983). *Rural Development: Putting the Last First*. Harlow: Longman.

Chambers, R. (1997). *Whose Reality Counts? Putting the First Last*. London: Intermediate Technology Publications

Cheru, F. (2001). 'Overcoming apartheid's legacy: the ascendancy of neo-liberalism in South Africa's anti-poverty strategy.' *Third World Quarterly*. 22 (4), 505-525.

Cousins, B. (2000). 'Introduction: Does land and agrarian reform have a future and, if so, who will benefit?' in Cousins, B. (ed.) *At the Crossroads: Land and Agrarian Reform in South Africa into the 21st Century*. Western Cape: PLAAS. 1-19.

Crookes, J.T. and Lyne, C.M. (2003). 'Efficiency and equity gains in the rental market for arable land: Observations from a communal area of Kwa-Zulu Natal.' *Development Southern Africa*. 20(5), 579-593.

Cross, C., Mngadi, T., Sibanda, S. and Jama, V. (1996). 'Making a living under land reform: Weighing up the chances in Kwa-Zulu Natal' in Lipton, M. et al. (eds.) *Land, Labour and Livelihoods in Rural South Africa, Volume Two: Kwa-Zulu Natal and Northern Province*. Durban: Indicator Press. 121-167.

Davis, S. (1995). *Adaptable Livelihoods: Coping with Food Insecurity in the Malian Sahel*. London: Macmillan Press. ✓

DBSA, (1998), Development Report, 1998: Infrastructure, A Foundation for Development, Development Bank of Southern Africa, Midrand. ✓

Department of Land Affairs. (1996) *Our Land: Green Paper on South African Land Policy*
Department of Land Affairs. Pretoria: Department of Land Affairs

De Vaus, D. (1985). *Surveys in Social Science*. Fifth Edition. Crows Nest, Australia: Allen & Unwin.

DFID. 2003. *Agriculture – the key to poverty reduction*.

www.dfid.gov.uk/pubs/files/agri_poverty_reduction.pdf Downloaded 13 June 2004. ✓

Dale, A., Davies, B.R. (1994). 'Introduction' in Dale, A., Davies, B.R (eds.) *Analyzing social and political change: a casebook of methods*. London: SAGE Publications. 1-19

Dorward, A., Poole, N., Morrison, J., Kydd, J. and Urey, I. (2003). 'Markets, institutions and technology: Missing links in livelihoods analysis.' *Development Policy Review*. 21(3), 319-351.

Ellis, F. (1998). 'Household strategies and rural livelihood diversification.' *Journal of Development Policies*. 35(1), 1-38

Ellis, F. and Biggs, S. (2001). 'Evolving themes in rural development 1950s-2000s.' *Development Policy Review*. 19(4), 437-448. ✓

FAO. 2001. *The Role of Agriculture in the Development of LDCs and their Integration into the World Economy- Paper prepared for the Third United Nations Conference on the Least Developed Countries* (Brussels, 14-20 May 2001). Rome
<http://www.fao.org/DOCREP/003/Y0491E/Y0491E00.HTM> Downloaded 9 June 2004.

FAO. (1998). *World Food and Agriculture: Lessons from the Past 50 Years*. Oxford: Oxford University Press
<http://www.fao.org/docrep/x4400e/x4400e01.htm#TopOfPage> Downloaded 11 June 2004. ✓

FAO. (2003). *Roles of Agriculture Project: National Report South Africa*. Rome, Italy.
http://www.fao.org/es/esa/roa/ROA-e/case_studies-e.htm#South
Downloaded 15 June 2004.

Fenwick, J.L. and Lyne, C.M. (1999) 'The relative importance of liquidity and other constraints inhibiting the growth of small-scale farming in Kwa-Zulu Natal.' *Development Southern Africa*. 16(1), 141-144

Gerster, R. (2000). *Alternative Approaches to Poverty Reduction Strategies, SDC Working Paper 1/2000*. Switzerland: Swiss Agency for Development and Cooperation.

Green, B. (2003). 'Power and politics in the shaping of rural development in post-apartheid South Africa.' *Interfund Development Update*. 4(1), 1-27.

Griffin, K., Khan, A., Ickowitz. A. (2002). 'Poverty and the distribution of land.' *Journal of Agrarian Change*. 2(3), 279-330.

Haley, G. (1996). *An Introduction to Using Data at DPLS*. Columbia: Data and Program Library Service, 5 March 2004
<http://dpls.dacc.wisc.edu/types/secondary.htm>

Hall, R. (1998). 'Design for equity: Linking policy with objectives in South Africa's land reform.' *Review of African Political Economy*. No. 77: 451-462.

- Harris, J. (1982). 'General introduction' in Harris, J. (ed.) *Rural Development: Theories of Peasant Economy and Agrarian Change*. London: Hutchinson University Library for Africa. 15-29.
- Hart, G. (1996). 'The agrarian question and industrial dispersal in South Africa: Agro-industrial linkages through Asian lenses' in Bernstein, H. (ed.) *The Agrarian Question in South Africa*. London: Frank Cass. 245-277.
- Hatch, G. (1996). 'Livestock and rural livelihoods in Kwa-Zulu Natal' in Lipton, M (ed.) *Land, Labour and Livelihoods in Rural South Africa, Volume Two: Kwa-Zulu Natal and Northern Province*. Durban: Indicator Press. 77-87. ✓
- Heaton, J. (1998) 'Secondary Analysis of Qualitative Data.' *Social Research Update*. Issue 22, available at <http://www.soc.surrey.ac.uk/sru/SRU22.html> Downloaded 9 February 2004 .
- Hendricks, L.S and Lyne, C.M (2003). 'Agricultural growth multipliers for two communal areas of Kwa-Zulu Natal.' *Development Southern Africa*. 20(3), 423-444.
- Hill, M. (1989), *Understanding Social Policy*. Oxford: Blackwell Publishers.
- Hirschowitz R, M. Orkin and P. Alberts (2002), *Key Baseline Statistics for Poverty Measurement*. <http://www.statssa.gov.za/products/publications>, Downloaded 20 January 2004. ✓
- Hussein, K. and Nelson, J. (1998). *Sustainable Livelihoods and Livelihood Diversification*. IDS Working Paper 69. <http://server.ntd.co.uk/ids/bookshop/details.asp?id=414> Downloaded 25 January 2004.
- IDS. (2000). What are Livelihoods? www.livelihoods.org/Sldefn.html Downloaded 9 January 2004.
- IFAD. "N.D." *Integrated Rural Development: Fighting Poverty Where Most of the World's Poor Live – in Rural Areas*.

<http://www.ifad.org/events/ecosoc/media.htm> Downloaded 22 December 2003.

IFAD. (2001). *Rural Poverty Report 2001-The Challenge of Ending Rural Poverty*. Rome: Palombi, http://www.ifad.org/poverty/e_sum.pdf. ✓

IFAD. (2002). *Assessment of Rural Poverty – Eastern And Southern Africa*. Rome: Palombi, <http://www.reliefweb.int/library/documents/2002/ifad-esaf1-31jan.pdf> Downloaded 25 November 2003.

Ingham, B. (1995), 'The role of agriculture in development'. *Economics and Development*. 11 (4).

ISRDS, 2000. The Integrated Sustainable Rural Development Strategy, accessed from http://www.landbank.co.za/agri_info/Documents/isrds1.pdf, 04/11/08.

()

Irz, X., Lin, L., Thirtle, C and Wiggins, S. (2001). 'Agricultural productivity growth and poverty alleviation.' *Development Policy Review*. 19 (4), 449-466. ✓

Jack, B.S. and Kelembe, S.G. (1993). *Food Security Issues In South Africa And Policy Implications For The Future*. Working Paper No.2. Macro-Economic Research Group. University of Fort Hare: Alice.

Kirsten, J., Towsen, R. and Gibson, C. (1998). 'Determining the contribution of agricultural production to household nutritional status in KwaZulu-Natal South Africa.' *Development Bank Southern Africa*. 15 (4), 573-587.

Klasen, S. (1997). *Poverty and Inequality in South Africa*. Common Security Forum.

Klasen, S. and Woolard, I. (1999). 'Levels, trends and consistency of employment and unemployment figures in South Africa.' *Development Southern Africa*. 16(1), 3-35.

Klassen, S. (1997), 'Poverty, inequality and deprivation in South Africa: An analysis of the 1993 SALDRU Survey' in Michalos, A.C and Moller, V (eds.) (What is the name of the book here?)

Knight, S., Lyne, M., Roth, M. (2003). 'Best institutional arrangements for farm workers equity-share schemes in South Africa' *Agrekon*. 42(3), 228-249.

Krantz, L. (2001). *The Sustainable Livelihood Approach to Poverty Reduction – An Introduction*. Sweden: Swedish International Development Cooperation Agency.

Kydd, J., Dorward, A., Morrison, J. and Cadisch, G. (2004). 'Agricultural development and pro-poor economic growth in sub-Saharan Africa: potential and policy.' *Journal of Oxford Development Studies*. 32 (1), 37-54.

KwaZulu-Natal Income Dynamics Study. Data and documents located at www.ukzn.ac.za/csds/Index.htm. Consulted August 2004.

Landman, J. P. (2003). *Breaking the Grip of Poverty and Inequality in South Africa – Current Trends, Issues and Future Policy Options*. Pretoria.

<http://www.sarpn.org.za/documents/d0000649/P661-Povertyreport3b.pdf>

Downloaded 7 March 2004.

Lenta, G. and Maasdorp, G. (1988), 'Limit factors on food production in the homelands', in Cross, C. and Haines, R. (eds.), *Towards Freehold: Options for Land and Development in South Africa's Black Rural Areas*. Cape Town: JUTA & Co, LTD. 223-240.

Levin, M.R. (1996). 'Politics and land reform in the Northern Province: A case study of the Mojapelo land claims' in Lipton, M (ed.) *Land, Labour and Livelihoods in Rural South Africa, Volume Two: Kwa-Zulu Natal and Northern Province*. Durban: Indicator Press. 357-390.

Levin, R. and Weiner, D. (1996). 'Peasants speak: The land question in Mapumanlanga' in Henry Bernstein (ed.) *The Agrarian Question in South Africa*. London: Frank Cass & Co. LTD. 278-285.

Liew, J. (2002). *The Sustainable Livelihoods Approach to Poverty Reduction*. <http://www.undp.org/fj/pslp/sla.html> UNDP 2001.

Lipton, M. (2004). *New Directions for Agriculture in Reducing Poverty: The DFID Initiative*. Brighton www.sussex.ac.uk/Units/PRU/new_directions_agriculture.pdf Downloaded 10 June 2004.

Lipton, M. (1982). 'Why poor people stay poor?' in *Rural Development: Theories of Peasant Economy and Agrarian Change*. London. Hutchinson University Library.

Lipton, M., de Klerk, M. and Lipton, M. (eds.) (1996a), *Land, Labour and Livelihoods in Rural South Africa. Volume Two: KwaZulu-Natal and Northern Province*. Durban: Indicator Press.

Lipton, M., de Klerk, M. and Lipton, M., (eds.) (1996), *Land, Labour and Livelihoods in Rural South Africa. Volume One Western Cape*. Durban: Indicator Press.

Lipton, M. (1996). 'Introduction' in Lipton, M. et al. (eds.), *Land, Labour, and Livelihoods in Rural South Africa*, South Africa: Indicator Press. 1-30. ✓

Lipton, M., Ellis, F. and Lipton, M. (1996). 'Introduction' in Lipton, M. et al. (eds.) *Land, Labour and Livelihoods in Rural South Africa, Volume Two: Kwa-Zulu Natal and Northern Province*. Durban: Indicator Press. iii-xix.

Lyne, C.M. and Fenwick, J.L. (1999). 'The relative importance of liquidity and other constraints inhibiting the growth of small-scale farming in Kwa-Zulu Natal.' *Development Southern Africa*. 16(1), 141-154.

Lyne, C.M. and Graham, H.D (2001). 'The impact of land redistribution on tenure security and agricultural performance in Kwa-Zulu Natal.' *Agrekon*, 40(4), 656-677.

Lyne, M. and Darroch, M. (2003) 'Land redistribution in South Africa: Past performance and future policy' In Nieuwondt Lieb and Groenewald Jan (eds.) *The Challenge of Change: Agriculture, Land and the South African Economy*. Durban: University of Natal Press. 6585.

Mather, C, and Adelzadeh, A. (1998). 'Macroeconomic strategies, agriculture and rural poverty in post-apartheid South Africa.' *Africa Insight*. 28 (1 /2), 25-35.

Matungul, P.M., Lyne, C.M., Ortmann, F.G. (2001). 'Transaction costs and crop marketing in the communal areas of Impendle and Swayimana, Kwa-Zulu Natal.' *Development Southern Africa*. 18(3), 346-363.

Maxwell, J.A. (1996). *Conceptual Context: What do You Think is Going on? In Qualitative Research Design: An Interactive Approach*. Thousand Okas: Sage Publications. ✓

May, J. (1996). 'Assets, income and livelihoods in Rural KwaZulu – Natal' in Lipton, M. et al. (eds.), *Land, Labour and Livelihoods in Rural South Africa, Volume Two: KwaZulu-Natal and Northern Province*. South Africa: Indicator Press. 1-30. ✓

May, J. (1998). *Experience and Perceptions of Poverty in South Africa*. Durban: Praxis Publishing.

May, J. (2000). 'Growth, development, poverty and inequality' In May, J. (ed.) *Poverty and Inequality in South Africa: Meeting the Challenge*. Cape Town: David Philip Publishers. 1-16.

May, J., Woolard, I., and Klasen, S. (2000). 'The nature and measurement of poverty and inequality,' in May, J. (ed.) *Poverty and Inequality in South Africa: Meeting the Challenge*. Cape Town: David Philip Publishers.

Mbeki, T. (1999). *The Integrated Sustainable Rural Development Strategy*. Cape Town. <http://www.landbank.co.za/infocentre/Documents/isrds1.pdf>
Downloaded 10 December 2003.

McIntosh, A. and Vaughan, A. (1996). 'Enhancing rural livelihoods in South Africa: Myths and realities' in Lipton, M. et al. (eds.) *Land, Labour and Livelihoods in Rural South Africa, Volume Two: Kwa-Zulu Natal and Northern Province*. Durban: Indicator Press. 91-118.

Mohamed, N. (2000). 'Greening land and agrarian reform: A case for sustainable agriculture,' in Cousins, B (ed.) *At the Cross-Roads: Land and Agrarian Reform in South Africa into the 21st Century*. Western Cape: PLAAS.163-175.

Motlounge, B. and Mears, R. (2002). 'Combating poverty in South Africa.' *Journal of Development Southern Africa*. 19 (4), 531-543. ✓

Mule, H.M. (2001). *Institutions and Their Impact in Addressing Rural Poverty in Africa*. <http://www.ifad.org/poverty/mule.pdf> Downloaded 23 February 2004.

Ngwane, A., Yadavalli, V., Steffens, F. (2001). 'Poverty in South Africa- A statistical analysis.' *Development Southern Africa*. 18(2), 201-213.

Oppenheim, A. N. (1992). *Questionnaire Design, Interviewing and Attitude Measurement*. London: Continuum.

Poonyth, D., Hassan, R., Kirsten, J.F. and Calcaterra, M. (2001). *Is Agricultural Sector Growth a Precondition for Economic Growth? The Case of South Africa*. Working Paper No.1. Department of Agricultural Economics, Extension and Rural Development. South Africa: University of Pretoria. ✓

Raandela, R. (2003), 'An economic assessment of the value of cattle to the rural communities in the former Venda region'. *Development of Southern Africa*. 20(1).

Roberts, B. (2001) 'Chronic and transitory poverty in post-apartheid South Africa: evidence from Kwa-Zulu Natal.' *Journal of Poverty*. 5(4), 1-27. ✓

SAHR. (2000). *Health and Related Indicators*.

<http://www.hst.org.za/sahr/2000/indicators.htm>. Downloaded 10 January 2003. ✓

Schirmer, S. (1999). 'Policy visions and historical realities: Land reform in the context of recent agricultural developments.' *African Studies*. 59(1), 12-27. ✓

Sender, J (1994). *Rural Poverty and Land Redistribution: Macroeconomic Issues*. Land Redistribution Options Conference. Land and Agriculture Policy Centre.

Sender, J. (2002). 'Women's struggle to escape rural poverty in South Africa.' *Journal of Agrarian Change*. 2(1), 1-31.

Shackleton, E.S., Shackleton, C.C. and Cousins, B. (2000). 'The economic value of land and natural resources to rural livelihoods: Case Studies from South Africa' in Cousins, B (ed.) *At the Crossroads: Land and Agrarian Reform in South Africa into the 21st Century*. Western Cape: PLAAS. 35-62. ✓

Shackleton, M.C., Shackleton, E. S. and Cousins, B. (2001). 'The role of land-based strategies in rural livelihoods: the contribution of arable production, animal husbandry and natural resource harvesting in communal areas in South Africa.' *Development Southern Africa*. 18 (5), 582-599

Statistics South Africa. (1999). *The People of South Africa: Population Census, 1996. Report Number. 03-01-11*. Pretoria. Statistics South Africa.

Streak, J. (2002) *New Results on Child Poverty in South Africa*, IDASA. <http://www.idasa.org.za/bis/briefs/default.htm>, Downloaded 20 January 2004-01-22.

Stringer, R. and Pingali, P. (2004), 'Agriculture's contribution to economic and social development, in *Journal of Agricultural and Development Economics*. 1(1). 1-15. ✓

Peret. S., (2002). *Livelihood Strategies in Rural Transkei (Eastern Cape Province): How Does Wool Production Fit in?* Working paper No.20. Department of Agricultural Economics, Extension and Rural Development. South Africa: University of Pretoria.

Taylor, N. and Cairns, R. (2001). May farming make a contribution to poverty alleviation in a "deep rural" area in South Africa? - Lessons from Oxfam GB's Sustainable Livelihood Programme at Nkandla, KwaZulu-Natal. Pretoria

<http://www.sarpn.org.za/documents/e0000008/20010605Taylor.pdf> Downloaded, 20 May 2004.

The World Bank Group. (2002). *Poverty Reduction Strategies: Rural Poverty*, available at <http://www.worldbank.org/poverty/strategies/chapters/rural/rural.htm> Downloaded 4 August, 2004.

Todaro, P.M. (2000). *Economic Development*. New York: Addison Wesley

Tosterud, J.R. (1996) 'Rural entrepreneurship: Measuring the magnitude of the challenge.' *Indicator South Africa*. 13(2), 35-39.

Townsend, R. and Colin, T. (2000). 'The effects of macroeconomic policies on agricultural prices, net farm incomes and exports: A vector autoregression approach' in Thirtle, C. et al. (eds.) *South African Agriculture at the Crossroads*. New York: ST. Martins Press, LLC. 276-307.

Vink, N. and Kirsten J. (2001). *A Descriptive Analysis Of Employment Trends In South African Agriculture. Working paper No.8. Department of Agricultural Economics, Extension and Rural Development*. South Africa: University of Pretoria

Wiggins, S. and Proctor, S. (2001). 'How special are rural areas? The economic implications of location for rural development.' *Development Policy Review*. 19(4), 427-436. ✓

World Bank. (2003). *Fostering an Enabling Environment for Broad-Based and Sustainable Rural Growth*. World Bank: Washington, DC.

World Bank Development Report. (2003). *Sustainable Development in a Dynamic World: Transforming Institutions, Growth and Quality of Life*. The World Bank: Oxford University Press. ✓

World Bank. (2001). *Reaching the Rural Poor – Executive Summary*. www.worldbank.org Downloaded 5 February 2004.

World Development Report (2000/2001). *Attacking Poverty*.
<http://www.worldbank.org/poverty/wdrpoverty/report/index.htm>.

Yao, S. (2000). 'How important is agriculture in China's economic growth?' *Oxford Development Studies*. 28(1), 33-48. ✓

Zulu, P. (1996). 'The political economy of rural livelihoods in Kwa-Zulu Natal' in Lipton, M. et al. (ed.) *Land, Labour and Livelihoods in Rural South Africa, Volume Two: Kwa-Zulu Natal and Northern Province*. Durban: Indicator Press. 232-253. ✓

Van Zyl, V.J., and Kirsten, J. (1996). 'Agricultural growth linkages: International experience and some South African estimates' in Van Zyl, V.J (ed.) *Agricultural Land Reform in South Africa: Policies, Markets and Mechanisms*. Cape Town: Oxford University press. 336-364.

Van Zyl, V. J., Kirsten, J. and Binswanger H. (1996). 'Introduction' in Van Zyl, V.J (ed) *Agricultural Land Reform in South Africa: Policies, markets and mechanisms*. Cape Town: Oxford University press. 3-17.